

HELSINKI SCHOOL OF ECONOMICS (HSE)  
Department of Accounting and Finance



## INVESTMENTS OF FINNISH FOUNDATIONS

HELSINGIN  
KAUPPAKORKEAKOULUN  
KIRJASTO

10028

Finance  
Master's thesis  
Tommy Petersen  
Spring 2006

Approved by the Council of the Department 6 / 3 2006 and awarded  
the grade hyvä, 70 pistettä  
KTT Vesa Puttonen ja KTT Sami Törstila

Helsinki School of Economics  
Master's Thesis  
Tommy Petersen

Abstract  
January 29, 2006

## **INVESTMENTS OF FINNISH FOUNDATIONS**

### **PURPOSE OF THE STUDY**

The objective of this thesis is to study the asset allocation and investment policies of Finnish foundations. The topic is motivated by the lack of academic research in this field.

The study focuses on finding in which assets and where geographically seen foundations invest in and whether foundations in Finland are conservative, favor steady cash flows, are effected in their investments by their own by-laws and terms set by donors, whether they are passive as investors and whether allocation of asset differs between foundations and pension funds.

### **DATA**

The study is conducted by examining solely Finnish foundations that are registered at the Register of Foundations. Similar non profit associations that pay grants are left out of the study. The data was gathered in spring of 2005 by sending a questionnaire to about 2200 out of the roughly 2700 foundations found in Register of Foundations. There was in total 207 questionnaires returned.

### **RESULTS**

This study finds that equity is the largest asset class the foundations have invested in. Foundations favor almost entirely Finnish assets in their investments leaving only a small share to investments abroad.

Foundations in Finland are clearly conservative and also clearly favor steady cash flows in their investment policies. There is no clear evidence indicating that foundations paying grants would favor steady cash flows more than foundations that do not pay any grants. There is also no evidence that the foundations' own by laws and terms set by donors affect the majority of foundations in their investments. Foundations are quite passive in their investments, since it takes on average 7 year for them to turnover their portfolio.

The study shows that Finnish foundations differ from Finnish pension funds in their asset allocations. Foundations favor equity whereas pension funds favor fixed income assets. One reason behind the result might be differences in investment horizons.

### **KEY WORDS**

Foundations, asset allocation, investment policy, investments

## TABLE OF CONTENTS

INVESTMENTS OF FINNISH FOUNDATIONS.....	2
1. INTRODUCTION .....	4
1.1. Background and motivation .....	4
1.2. Research problem and purpose .....	5
1.3. Contribution of the study.....	5
1.4. Limitations of the study.....	6
1.5. Structure of the study .....	6
2. OVERVIEW OF FINNISH FOUNDATIONS .....	7
3. LITERATURE REVIEW.....	12
3.1. Previous Research .....	12
3.2. Modern portfolio theory .....	15
4. DATA, HYPOTHESES AND METHODOLOGY .....	19
4.1. Data .....	19
4.2. Hypotheses .....	20
4.3. Methodology .....	21
5. RESULTS.....	22
5.1. Investments, income and grants .....	22
5.2. Allocation of assets .....	26
5.2.1 <i>All foundations</i> .....	26
5.2.2 <i>Small foundations with investments under 1 million euros</i> .....	30
5.2.3 <i>Medium size foundations with investment between 1 and 5 million euros</i> .....	34
5.2.3 <i>Large foundations with investment of 5 million euros and above</i> .....	39
5.3. Summary of differences between different size foundations in asset allocation .....	44
5.4. The investment policies of foundations are conservative .....	47
5.5. Foundations favor investments with steady cash flows in their investment policies.....	51
5.6. Foundations paying grants consider investments yielding steady cash flows more important than foundations that do not pay grants at all. ....	54
5.7. Foundations' own by-laws and the terms set by their donors affect the investments of the majority of foundations .....	56
5.8. Foundations are passive as investors.....	57
5.9. Differences between Finnish foundations and pension funds in asset allocation .....	59
6. SUMMARY AND CONCLUSIONS.....	62
REFERENCES .....	65



## **1. INTRODUCTION**

### **1.1. Background and motivation**

There are over 2700 foundations in Finland with a wide range of purposes including financial support for science and culture or arrangement of affordable accommodation for students. The size of the investment portfolios of these foundations varies anything from a few thousand euros to assets of hundreds of millions of euros.

Although Finnish foundations are quite significant investors in Finland, there has been very little or no research at all on the investments and investment policies of these foundations. The biggest foundations are in fact among the largest shareholders of many publicly traded Finnish companies. Foundations are not only large shareholders but they have also significant stakes in real estate and fixed income instruments.

What makes foundations interesting is the fact that they differ from normal organizations quite significantly. First, they don't have any owners or members, but only a board, which administers the property of the foundation and fulfils the purpose of the foundation. Secondly, foundations are obligated by law to invest their property in a safe and profitable way. Thirdly, the purpose of a foundation must be useful, in other words, its sole purpose cannot be to carry out business or to bring direct financial benefits to its founder or a functionary of the foundation. In addition, if a foundation acts for the public good, it is considered tax exempt by the tax authorities. This again affects the investment policies of the foundations, since they might lose their tax-exempt status if they are too active in their investments.

Foundations are major donors in Finland. They paid in 2004 around 100 million euros in donations. Significant proportion of this sum is financed by investment income made by Finnish foundations, which means that investments have a major role in fulfilling the purpose of the foundations. This fact makes the research of foundation investments and investment policies even more interesting.



## **1.2. Research problem and purpose**

The purpose of this thesis is to study Finnish foundations on how they invest and what their investment policies are like. The objective is not to measure the historical performances of foundations, but to find out how and where foundations in Finland invest their wealth and what reasons might affect these investment choices.

The study addresses the following questions: Whether foundations are (1) conservative investors, (2) whether they favor investments that provide steady cash flows, (3) whether foundations paying grants favor more steady cash flows than foundations not paying grants at all, (4) whether terms set by donors or the foundations own by-laws affect the investment decisions of foundations and (5) whether foundations are passive investors?

The study takes also a brief look at whether foundations in Finland have allocated their investment assets differently from pension funds in Finland and tries to give an explanation to why the results differ.

## **1.3. Contribution of the study**

Although, Finnish foundations are significant investors in Finland, there has been no empirical research on foundations of any kind until lately. None of these studies have, however, covered the investments or investment policies of foundations. The purpose of these other studies has been to either give an overview of Finnish foundations or describe legislative or accounting issues.

This study is the first one to cover the investment allocation and investment policies of Finnish foundations. Therefore this study attempts to open a whole new chapter in foundations research in Finland by introducing the topic of investments of Finnish foundations.

#### **1.4. Limitations of the study**

This thesis is limited to the data collected by a questioner sent to Finnish foundations. The reliability of the data is subject to the foundations providing correct information. The results represent only a sample of the whole population and are also only a snapshot in time. This might cause the actual results for the entire sample to differ from the ones presented in this thesis.

#### **1.5. Structure of the study**

The structure of this thesis is organized as follows. Section 2 gives a brief overview of Finnish foundation on how they are structured, how they operate and what are the legal requirements for foundations in Finland. Section 3 deals with previous research of foundations and discusses briefly modern portfolio theory. Section 4 presents the data hypothesis and methodology. Section 5 presents broadly all the results and compares asset allocation between different sized foundations and also to pension funds. Finally section 6 presents the summary and conclusion and makes suggestions for further research.

## 2. OVERVIEW OF FINNISH FOUNDATIONS

Foundations are independent legal persons established to manage the property handed over to them so that they can fulfill their purpose. Private persons or any one of full capacity can establish a foundation by a deed of foundation or a will. In addition to their own by-laws, foundations are also regulated by the Foundations Act and Foundations Decree.

A foundation can be established for several reasons, as for example to support cultural or scientific development, to maintain a museum or an educational institution or to promote political organizations or environmental protection among other things.

All Foundations in Finland, except those subject to public law, are registered at the Register of Foundations kept by the National Board of Patents and Registration. The first foundation was registered in 1931 and currently the register comprises of over 2.700 foundations from different parts of Finland (Ahdeoja, 2003).

Foundations are not considered to be corporations in the civil law, since they have no owners, shareholders or members. The founder, after the foundation has become a legal person, is no longer entitled or obligated to take part in the operation of the foundation or obligated in anyway to take part in financing the foundations future operations (Ahdeoja, 2003). It is the board of trustees who is responsible to organize a capable management of the affairs of the foundation and securely and profitably invest the foundation's assets.

Auditors are in very important position, because of the special characteristics of foundations. The auditors chosen to audit the accounts and administration should for example pay great deal of attention to the way the foundation fulfills its purpose and how properly the assets are invested (Ahdeoja, 2003).

Foundations can be divided into private law and public law foundations. All foundations established according to the Foundations Act and registered at the Register of Foundations are private law foundations regardless of the founder (Kurkinen, 1988). Public law foundations are



always established through legislative action. They are not registered at the Register of Foundations. An example of a Public law foundation in Finland is the Finnish National Fund for Research and Development (SITRA), but also the Bank of Finland and the Social Insurance Institution (KELA) can be considered as Public law foundations (Kurkinen, 1988).

Foundation can be further divided into capital foundations and institutional foundations. Capital foundations use the proceeds from the capital they have invested to fund the grants that they give. Institutional foundations on the other hand are established to run an institution such as old-age homes, folk high schools, hospitals etc. (Kurkinen, 1988) According to Manninen (2005) foundations can also be divided into three different groups: Grant making foundations, which mainly pay grants for a particular purpose, operating foundations, which operate mainly through their own programs and projects and mixed foundations, which both operate through their own programs and projects and pay substantial grants. However, Manninen argues that this type of classification does not fit very well Finnish foundations, since in Finland foundations paying grants are typically classified as grant making regardless of any other possible activity.

The establishment of a foundation is a two-step process. First the founder has to obtain permission from the National Board of Patents and Registration, which also confirms the foundations own by-laws. After the National Board of Patents and Registration has given the permission to establish the foundation, the founder has to take action to elect a body to the foundation according to the foundations own by-laws. After the board of the foundation and the auditors have been elected and the property intended to the foundation has been handed over, the foundation must be entered into the register of foundations.

To obtain the permission to establish a foundation it is required that the purpose of the foundation is useful. The permission cannot be given if for example the purpose of the foundation is to carry on business or to mainly bring direct financial gain to the founder or a functionary of the foundation. Permission can also not be given if the intended property of the foundation is below 25.000 € or it is in such disproportion to the purpose of the foundation that there is no ground for establishing the foundation. (PRH, 2004)

According to the Foundations Act section 3 the deed of a foundation shall state the purpose of the foundations and its property. The founder or the founders, if there is more than one founder, decide on the purpose of the foundation. According to Kurkinen (1988) the deed should also preferably mention the name of the foundation and that the founders have approved the foundations own by-laws. The deed has to be dated and signed by the founders and attested by two persons. Every founder has to transfer some form of property to the foundation. However, the amount of property transferred does not have to be equal in size. The foundations property has to be specified in the deed. If the transferred property is something else than cash, for example securities or real estate, it has to be mentioned in the deed. The securities and real estate have to be also specified individually. In addition, a statement from an impartial expert about the value of property that cannot be reliably other ways valued should be included in the deed (PRH, 2004).

If the endower does not personally take care of the establishment of the foundation, he or she has to appoint a person to do it. When there is more than one endower, the deed can specify who is responsible for establishing the foundation. This person can also be granted the right to make small changes in the foundation's own by-laws if required by the authorities. (Kurkinen, 1988))

A foundation can also be established by a will. The will has to be in a written form, appropriately drawn up and legally valid. In this case there is no need for a separate deed. The will should at least, according to Kurkinen (1988), mention the purpose of the foundation and the property given to its use. The testator can decide either to leave by will all his property or only a part of it to the foundation meant to be established. However, the value of the property left by the will has to meet the required minimum capital needed to establish a foundation at the time the will is drawn up This does not, however, apply to wills drawn up before 1.6.1987. (Kurkinen, 1988)

According to Kurkinen (1988) it is quite common among foundations established by a will, that the founder (testator) gives among other things instructions on administrative issues and instructions on how the foundation's property should be managed. These instructions should be included in the foundation's own by-laws, if they are not illegal or contrary to good practice.



The person administering the decedent's estate or another person named by the decedent is responsible for undertaking the task of establishing the foundation. If the will does not name any person to undertake the task of establishment or the person named for this task refuses or is unsuitable, the court shall appoint one or more persons for the task (Foundations Act section 3a). According to the Foundations Act section 3a, the person administering the decedent's estate shall within three months from the date when he learned about the provisions for the establishment of a foundation submit a notice thereof to the court.

According to the Foundations Act the foundation's by-laws should at minimum mention the following:

- 1) The name of the foundation, which must contain the word "foundation" and be clearly distinguishable from other foundations previously registered in the Register of Foundations
- 2) The municipality where the foundation's registered office will be located
- 3) The purpose of the foundation and the means of carrying out that purpose
- 4) The property endowed on the foundation and how it is to be administered
- 5) The number of trustees and auditors of the foundation as well as their manner of appointment and term of office
- 6) Provisions on the signing of the name of the foundation
- 7) The time when the annual accounts of the foundation are to be closed and the accounts and administration audited
- 8) Provisions on the amendment of the foundation's by-laws and the termination of the foundation

The purpose of the foundation has to be useful, but it does not have to be for the public good. However, only foundations that are for promoting the public good are tax exempt. All the other foundations are subject to taxation. The separation between useful foundations and foundations for promoting the public good is made by the tax authorities. According to (Kurkinen, 1988) the majority of foundations in Finland in the Register of Foundations are for promoting the public good.



Although Foundations' purpose cannot be to carry on a business, they can, however, carry on a business that is mentioned in their by-laws and facilitates directly in carrying out the purpose of the Foundation.

Foundations are quite significant investors in Finland. The largest foundations are among the biggest Finnish shareowners in many companies listed in the Helsinki Stock Exchange. To name a few companies, Nokia, UPM-Kymmene, Wärtsilä, Huhtamäki, Kesko and Stockmann are all large Finnish exchange listed companies with foundations as large owners.

There is, however, no statistics on how much foundations have investments assets in total. According to Suomen Arvopaperi keskus (2005) the market value of the Helsinki Stock Exchange was at end of 2004 almost 160 billion euros, from which non-profit bodies, such as foundations, had share of 3 percent or 4,7 billion euros. The non-profit body includes also many other organizations than foundations such as grant paying non-profit associations and churches and so on. Therefore it is not possible to give a precise number on how large the share is for foundations only.

My own estimate is, based on the data on the largest shareowners in Finland, somewhere between three and four billion euros. This is of course only equity ownership and to estimate the total investment assets is even more difficult. Based on the results I have got from the questionnaire send to foundations, I would roughly estimate that the total investments could be between four and a half and eight billion euros. Manninen (2005) reported in her study that in 2002 the total assets of the 524 foundations, included in her study, were about 5,3 billion euros. This number, however, includes also the assets of 11 large associations that are not legally foundations and therefore excluded from this study and furthermore the number represents the total assets of foundations instead of only investment assets. Taking this into account the value of investment assets for the foundations in Manninen's study would probably be closer to the lower end of my estimate of all foundations. Of course the results of Manninen represents only about 500 foundations and taking this into account the total investment assets of all foundations would probably be inline with my own estimate.

### 3. LITERATURE REVIEW

#### 3.1. Previous Research

Although there have been many studies (e.g. Sharpe 1966; Fisher and Lorie 1968; Jensen 1968; Fama 1972; and Ferri et al. 1984) on the theory and performance of various investment portfolios, most studies have been directed toward the profit oriented market, often the performance of mutual fund managers. Over the last decades only a few studies have been conducted on the investments and investment performance of the portfolios of nonprofit institutions.

In 1968, the Boston Fund (see Clark and Wootton 1995) conducted an extensive study of the composition of collage endowments. The following year (1969), the Ford foundation (see Clark and Wootton 1995) published its report that found that American universities had not been highly successful in managing their endowment funds. Davidson (1971) studied the endowments of 116 collages and found that externally managed founds outperformed internally managed funds. However, Davidson did not adjust returns for differences in risk in the college endowments (Clark &Wootton 1995).

Kim (1971) examined forty small endowment funds over a ten-year period and discovered that a majority of college endowment funds underperformed the Standard and Poor's 500 equity index. However, for the last four years of the study Kim found 52 % of collage portfolios exceeded the benchmark portfolio. In 1985, the Association of Governing boards of Universities and Colleges (see Clark & Wootton 1995) found in its study that when adjustments were made for asset allocation decisions, most endowment funds underperformed the market index.

The National Association of College and University Business Officers (NACUBO) has conducted since 1971 an annual endowment study of its member institutions with endowment assets over \$1 million (see Clark & Wootton 1995). In this survey, information is gathered on factors such as endowment spending rules, asset allocations, management expenses and market values. The survey also evaluates the overall investment performance of surveyed colleges by



constructing an average annual compound rate of return for all endowments. This survey does not, however, utilize the traditional mean-variance analysis of risk for such funds.

Clark & Wootton (1995) examined the performance of 217 college endowments funds and found that managers of collage funds have a strong aversion to risk taking in their investment policy. Only 3 of the 217 endowment portfolios showed a beta of greater than 1 when compared to the Standard and Poor's 500 index in either five or ten-year study periods. They also found that the overall performance of collage endowment funds when measured over one year was very strong and over five years strong, but the performance over ten years was weak. Clark & Wootton give two explanations to this. First, portfolio managers might have instituted new, more successful investment techniques over the last years. Second, if investment techniques have not changed over this period, returns on certain portfolio's assets might have changed. The fact that most of these portfolios of college endowments are highly invested in debt can be a logical explanation for the difference in investment performance over the period of time. In addition Clark & Wootton found that generally there was an increase in investment success as the size of the collage endowment funds increased.

There are only a handful of studies made in Finland about Foundations much less about their investments. Helenius & Laaksonen (1983) studied in their master thesis foundations and funds that financed entrepreneurship. Ylikortes (1991) examined in his master thesis among other organizations taxation of foundations.

Manninen (2005) has probably made the most significant study about Finnish foundations. Her research is part of the Dimensions of the Foundation Sector in the European Union project. The project involves several European countries. The main goal of this project is to generate a general view of European foundations as a part of the third sector. The research project has been argued to recognize the importance and status of foundations, to find out the positioning of foundations in the third sector, to recognize the collective identity of foundations, to see the significance and workings of foundations in the globalizing world and to enhance the operation of foundations through research and education.



Palmu (1994) has studied Finnish foundations from a point of view of real estate. His study had two objectives: How to develop the real estate investment strategies and management of Finnish foundations and what kind of services could become new business areas for real estate consultants providing services to the larger foundations. An important finding in Palmus study was that objectives for real estate investment should be improved. This would spur development of strategies and management. Palmu found also that foundations are clearly risk adverse in their investment policies. He guesses that lack of information or knowledge may be the reason some risks are overestimated. Palmu states that risk is the main barrier to foundations' investing. He argues that foundations should define a risk strategy and method of risk management. This could according to him increase investment possibilities and could strengthen the likelihood of gaining profit while avoiding loss.

According to Honkapohja (see Palmu 1994) the book value of the property of 394 foundations was altogether in 1991 5.1 billion Finnish Marks (roughly 0,94 million euros). Half of this was allocated in stocks, one third in real estate and the rest in bonds and money market investments. According to Palmu the distribution of property according to the type of investment seems to have correlation to the value of the balance sheet. The larger the foundation is, the bigger the proportion of stocks and real estate in the investment portfolio. On the other hand, the smaller the foundation is, the bigger the proportion of money market investments and bonds.

Alestalo & Puttonen (2005) have studied asset allocation in Finnish pension funds. They found that Finnish pension funds have on average 44 % of their investment portfolio in fixed income, 20 % in equity, 19 % in money market instruments, 13 % in real estate and the rest in other investments. Perhaps the most important finding Alestalo and Puttonen (2005) made was that there is relation between the age structure of employees and the strategic asset allocations of pension funds. There is a positive correlation between the age structure of employees and the proportion of fixed income investments and negative correlation between age structure of employees and the proportion of equity investments. These results would suggest that pension funds with younger policyholders should have longer investment horizons and therefore would have larger proportion of their investment portfolios in equity than pension funds with older policyholders and shorter investment horizons.

### 3.2. Modern portfolio theory

Markowitz (1952 & 1959) is considered to be the father of modern portfolio theory. His original book and article for the first time outlined distinctly modern portfolio theory by formulating the portfolio problem as a choice of the mean and variance of a portfolio of assets (Elton & Gruber, 1997). Markowitz (1952) formulated the efficient frontier by proving the fundamental theorem of mean variance portfolio theory, namely holding variance constant and maximizing expected return, and holding expected return constant and minimizing variance. The investor could then chose his or her preferred portfolio, depending on individual risk return preferences. The theory was revolutionary in that sense that it took into consideration the co-movements of asset returns enabling investors to diversify their portfolios. This means that investors can construct, taking these co-movements into account, a portfolio that has the same expected return and less risk than a portfolio constructed by ignoring the interactions between securities. (Elton & Gruber, 1997)

According to Elton and Gruber (1997) the consideration of just mean return and variance of return of a portfolio is a simplification relative to including additional moments that might more completely describe the distribution of the portfolios returns. The mean variance theory has remained as the cornerstone of the modern portfolio theory despite the new alternatives, such as the utility function of investors, the return distribution of assets that results in mean variance theory being optimal or portfolio theories that included more moments such as skewness or are accurate for more realistic descriptions of the distribution of return. Elton and Gruber (1997) argue that there are two reasons for this. Firstly there is no evidence that adding additional moments of data improves the desirability of a portfolio. Secondly, the implications of mean variance portfolio theory are well developed, widely known, and have great intuitive appeal.

The Mean variance portfolio theory was developed to find the optimum portfolio when an investor is concerned with return distributions over a single period. The mean return and variance of return for each asset and the correlations and covariances between all pairs of assets being considered need to be estimated over the single period. According to Elton and Gruber (1997) one of the major theoretical problems that has been analyzed is how the single-period model should be modified to work as a multi-period model. Researchers such as Fama (1970),



Hakansson (1970, 1974), Merton (1990), and Mossin (1969) have all analyzed this problem under various assumptions. Papers by these researchers found that under several sets of reasonable assumptions, the multi-period problem can be solved as a series of single-period problems. Elton and Gruber (1997) argue, however, that the optimum multi-period portfolio would be different from that selected if only one period was examined. This is because the appropriate utility function in the multi-period case is different from the utility function that is suitable for the decision making over a single period. Elton and Gruber Point out also that the assumption of independence of returns between periods, underlying most multi-period portfolio analysis, has been proven wrong by several studies. According to Elton and Gruber a major research topic is how this should effect optimum multi-period portfolio decisions.

According to the classic mean-variance analysis all investors who care only about mean and standard deviation will hold the same portfolio of risky assets, the unique best mix of assets. Conservative investors will combine this portfolio with a risk free asset to achieve a point down and left on the mean-variance efficient frontier, moderate investors will reduce their risk free holding and move up and to the right on the mean-variance efficient frontier and aggressive investors will decrease the risk free holding more or even borrow to leverage their holdings of the tangency portfolio, reaching a point on the straight line that is even riskier than the tangency portfolio. However, none of these investors should alter the relative proportions of risky assets in the tangency portfolio. This is known as the mutual fund theorem of Tobin (1958). However, according to Campbell and Viceira (2002) there are many reasons why different portfolios of risky assets might be appropriate for different investors. They mention that issues like tax code, characteristics of labor income and differences in investment horizons create differences across investors.

Campbell and Viceira (2002) argue that long-term investors may judge risks very differently from short-term investors. Treasury bills and other money market investments are relatively safe for short-term investors but not for long-term investors. Long-term investors must roll over bills at uncertain future real interest rates meaning that they must understand the risk that short-terms assets will be reinvested at unattractively low inters rates. According to Campbell and Viceira (2002) the safe asset for a long-term investor is not a treasury bill but a long-term inflation-



indexed bond, which provides a stable stream of consumption in the long run and which is actually less risky than cash in the long-term. Nominal bonds, however, according to Campbell and Viceira (2002) share the same characteristics of inflation-indexed bonds only when inflation risk is low. In an environment with uncertain inflation nominal bonds are no longer safe long-term assets. Equities are traditionally been regarded as risky assets. They offer higher average returns, but these returns represent compensation for higher risk meaning equities should be treated with caution by all but the most aggressive investors. However, in recent years several authors have argued that equities are in fact relatively safe assets for investors who are able to hold them for the long term. Siegel (1994) argues that long-term investors should aggressively buy and hold equities. Siegel bases his claim on the reduced risk of returns at long time horizons. Glassman and Hassett (1999) suggest even more extremely that stocks are just as safe as bonds or treasury bills.

According to Campbell and Viceira (2002) the view that stocks are safe assets in the long horizon is based on the evidence that excess stock returns are less volatile when they are measured over long holding periods. They argue that mathematically such a reduction in stock market risk at long horizons can only be due to mean-reversion in excess stock returns, which is equivalent to time variation in the equity premium.

Other element of theoretical research has been the study of separation theorems. According to Elton and Gruber (1997) if an investor has access to a risk free asset, it is easy to show that the choice of the optimum portfolio of risky assets is unequivocal and independent of the investor's taste for expected return or variance. Elton and Gruber say that the separation theorem has two implications. First, it alleviates calculation so that the portfolio problem can be stated as finding the tangency portfolio to a ray passing through the riskless asset in expected return standard deviation space. The tangency portfolio is the portfolio that maximizes the ratio of expected return minus the return on the riskless asset to the standard deviation. Second, it leads to mutual fund theorem, namely that all investors can obtain their desired portfolio by mixing two mutual funds, one made up of the riskless asset and one representing the tangency portfolio.

According to Elton and Gruber (1997) there are two types of theoretical research that have not had a major impact on the implementation of portfolio management, but have received substantial attention in the literature. First, a number of articles have been analyzing the portfolio problem in continuous time, where the portfolio problem and consumption investment problem are solved simultaneously. Primary the results from the continuous-time framework have confirmed the discrete-time results. The major exception is, however, Merton's (1990) results concerning hedging portfolios. Merton argues that in the intertemporal continuous-time framework an investor needs to hold hedging portfolios to protect against changes in the state variables. The second type of theoretical research that has received some attention, but has had little impact on practice, is the attempt to understand how current holdings and transaction costs should affect portfolio rebalancing.

## 4. DATA, HYPOTHESES AND METHODOLOGY

### 4.1. Data

The study is based on data collected by a questionnaire sent to around 2200 foundations out of the 2700 foundations found from the Register of Foundations. A questionnaire is used because the data collected is unique and therefore it is not available from any other source. The fact that no study, prior to this one, has been made about investments of Finnish foundations means that there is no data publicly available on this subject to compare with the results from this study. Non-profit associations that pay grants and have similar characteristics to foundations are left out of the study. The list of addresses of the foundations was purchased from TietoEnator. Foundations with no or virtually no investment capital were left out the study. Around 500 foundations were excluded from the study according to their purpose, which indicated that these foundations would not have any investment assets. These foundations include for example institutional foundations that are financed by endowments or foundations for housing.

There were in total 207 replies to the questionnaire sent to the foundations. From these replies 27 were insufficient and not included in this study. In addition many questionnaires were filled in incompletely and therefore the real number of answers varies between different questions in the questionnaire. Some 200 questionnaires were sent to a wrong address and therefore in the end about 2000 foundations received the questionnaire. This means that about 10 % of the foundations that received the questionnaire replied.

The data was collected during the first half of year 2005. The numerical data collected includes the following: Total size of investment portfolio, investment income in 2004, the allocation of all income in 2004, turnover of investment portfolio and allocation of investments into different asset classes, geographical location and currencies. In addition to the numerical data, the data collected includes also information about the investment policies of the foundations in the form of multiple-choice questions. In addition data on Finnish pension fund asset allocation was used from the study made by Alestalo & Puttonen (2005).



## 4.2. Hypotheses

### *H1 The investment policies of foundations are conservative*

Since it is required in the Foundations act that foundations have to invest their assets in a secure and profitable way, foundations cannot be risk takers. Many Foundations rely heavily on the income generated from their investments and therefore cannot risk their whole existence on too much risk taking. Foundations, however, generally last to perpetuity, which in theory would mean that they could invest 100 % in stocks.

### *H2 Foundations favor steady cash flows in their investment policies*

For many foundations the proceeds from their investments are the main source of income and therefore foundations have to favor investments that give steady annual cash flows. The proceeds are used for grants, endowments and out-of pocket expenses.

### *H3 Foundations paying grants consider investments yielding steady cash flows more important than foundations that do not pay grants at all.*

Foundations paying annually grants depend more on steady cash flow from investments than foundations that do pay grants at all. Many non-paying foundations receive income from other sources than investments and do not at least depend as much on cash flow from investments.

### *H4 Foundations' own by-laws and the terms set by their donors affect their investment decisions*

The foundations own by-laws and terms set by donors may restrict its investment possibilities. Restriction may prohibit the foundation for example from selling shares that have been donated to it, investing in certain investment classes, taking risk in its investments or from investing actively.

### *H5 Foundations are passive as investors*

Foundations that are tax exempt cannot be too active since they can loose their tax status if the tax authorities interpret them to be too active in their investments. In addition if foundations rely more on steady cash flows generated in form of dividends, interest rates and rents, they do not have to sell their assets to generate cash flows.

### 4.3. Methodology

The study is based on a questionnaire sent to around 2200 foundations. The questionnaire includes both open and multiple-choice questions. The open questions are mostly linked to determine allocation between assets and asset classes, whereas the multiple-choice questions are more linked to determine the investment policies of foundations. However, some multiple-choice questions are linked with open questions to include explanations with answers.

Multiple-choice questions have either two or five alternative answers to choose from. Questions with only two answer options are simple “yes” or “no” questions, which are easy to answer. Questions with five possible answer alternatives measure the strength of opinion on a scale “very important”, “important”, “less important”, “not important” and “don’t know”

All answers are confidential and are only reported as aggregate numbers in form of averages. Answers that are open to interpretations are discarded. However, faulty answers that with large likelihood can be interpreted correctly are included in the final results. Arithmetic, median and mode averages are calculated from all reported answers when possible. All reported asset allocation numbers are based on weighted averages. The weights are based on the size of each individual investment portfolio. Also basic statistical calculations such standard deviation, minimum and maximum values are reported if possible.

Answers to multiple-choice questions are reported as averages of the relative distributions on the answer scale. The results from the multiple-choice questions are tested for significance by standard statistical tests.

## 5. RESULTS

There were in total 207 answers to the questionnaire sent to around 2200 foundations. From these answers 27 were either from foundations, which had no investments at all or were not filled in enough and were therefore rejected. The results are therefore based on the answers given by the rest of the 207 foundations or in other words the remaining 180 foundations. However, since some questionnaires were filled in to some part incompletely, the number of answers between different questions varies to some extent.

### 5.1. Investments, income and grants

Table 1 below shows clearly that the foundations in Finland are quite heterogeneous in terms of size. The market value of the investments of the Foundations, who answered the survey, varies from as little as 16 thousand euros to as much as 871 million euros. The combined market value of all investments is in total about 2400 million euros. The five largest foundations measured in size of investment portfolios count for as much as 79 % of all combined market values of investments in this study.

Table 1: Descriptive statistics of investments, income and grants given

	Market value of Investments	Year 2004 income	Grants paid in 2004
<b>Total</b>	2415 million €	300 040 000 €	58 270 000 €
<b>Average</b>	14 million €	1 680 000 €	400 000 €
<b>Median</b>	0,7 million €	50 000 €	13 700 €
<b>Mode</b>	0,2 million €	20 000 €	4 000 €
<b>Minimum</b>	0,016 million €	0 €	0 €
<b>Maximum</b>	871 million €	74 800 000 €	24 800 000 €
<b>St. Dev.</b>	77 million €	7 890 000 €	2 240 000 €
<b>N</b>	175	179	147

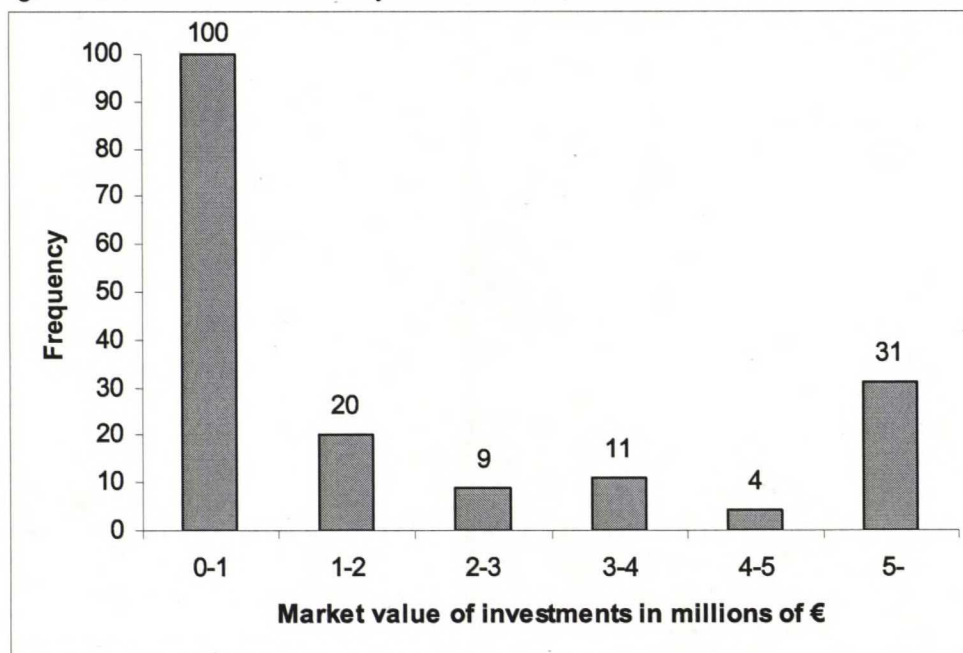
The average market value of investments is 14 million euros, however since a few of the foundations are significantly larger than the rest of the foundations, the arithmetic average shows poorly the real size of all the foundations. This can be clearly observed from the median and mode of the market values as they are only 0,7 million euros and 0,2 million euros respectively. The same thing can be seen from figure 1 below, which shows how the market values are distributed. The figure illustrates that as many as 100 out of 175 foundations or 57 % have



investment portfolios worth less than one million euros and only 31 or 18 % portfolios worth more than 5 million euros. Foundations with investments worth 1-5 million euros represent about 25 % of the sample.

One reason for the market values of the investment portfolios being so low is that there are many foundations that do not pay any grants at all or paying grants is not the sole purpose of the foundations and therefore they do not have or need any significant amounts of investment. In addition many of these smaller foundations receive income for example in form of donations and financial support.

Figure 1: Distribution of foundations by market value of investments



Annual income in year 2004 for the foundations that participated in this study was according to table 1 on average 1.680.000 euros. As it was in the case of market value of investments, also the arithmetic average for income shows poorly what the income was for the most foundations. The Median and Mode for income in year 2004 were only 50.000 euros and 20.000 euros respectively.

Figure 2 below shows how the income for the foundations was on average distributed between investment income, donations and other income. The figure clearly illustrates that in year 2004

the main source of income for the foundations in this study, was from investment returns as they contribute on average as much as 62 % of all income. Donations were only 11 % of the total income and other income such as revenue from lotteries, rummage sales or sideline business was 27 %.

One reason for the fact that on average income is generated mainly from investments is that, as figure 3 shows, 82 % of the foundations in this study pay grants and scholarships. This means that they need a steady annual source of income to enable this. As foundations cannot carryout business if they want to remain tax-exempt, investment income is for many the only reasonable source of income. Many foundations have received large donations either when they were established or later and therefore do not need any income beside the investment income generated from these donations. However, the distribution between the sources of income is based on year 2004 income figures and does not necessarily represent the actual distribution if there have been extraordinary events that year.

Figure 2: Distribution of income for year 2004 between investment returns, donations and other income calculated as an income weighted average

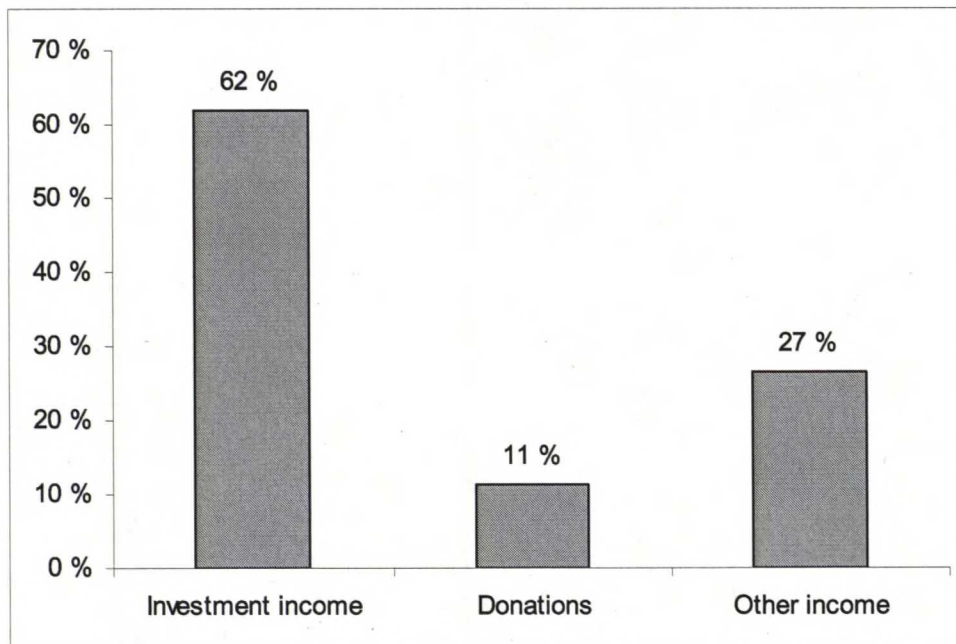
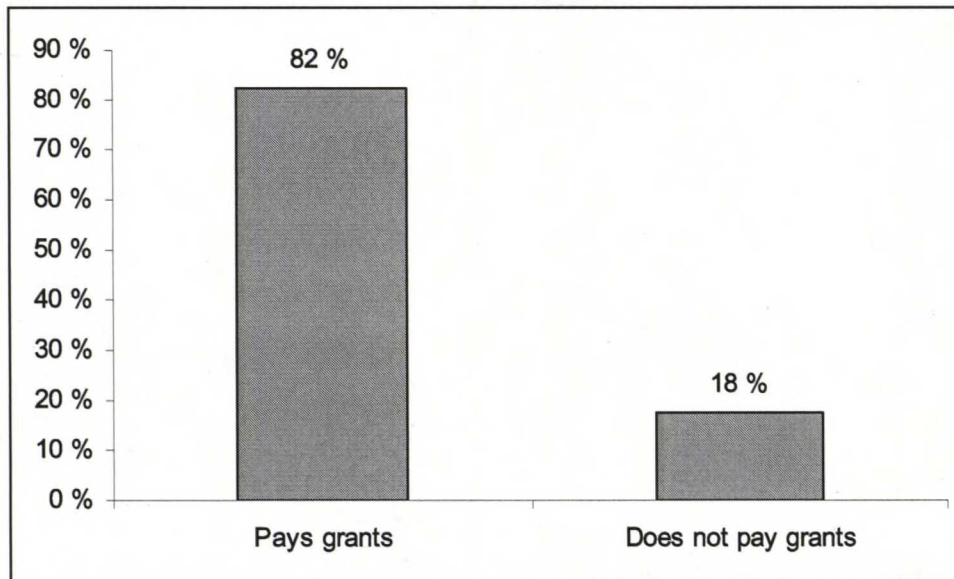




Figure 3: Relative distribution between foundations that pay grants and foundations that do not



The foundations that are members in the *Säätiöiden ja rahastojen neuvottelukunta*<sup>1</sup> association paid in year 2004 in total about 88,3 million euros in grants (Säätiöpalvelu 2005). According to Manninen (2005) the members of *Säätiöiden ja rahastojen neuvottelukunta* give about 80 % of all grants paid in Finland by foundations and therefore it can be estimated that the foundations in Finland paid in 2004 around 110 million in grants.

Table one shows that the foundations that participated in this study paid in year 2004 in total roughly 58 million euros in grants and endowments. This means that this study represents in terms of paid grants about half of all grants paid by foundations. On average the foundations paid 400.000 euros in grants. However, this number varies greatly from 0 euro to 24,8 million euros for the same reason mentioned already above that the size of the foundations is not evenly distributed. The median and mode values are again much lower than the arithmetic average, that is 13.700 € and 4000 € respectively.

<sup>1</sup> Säätiöiden ja rahastojen neuvottelukunta is an association that was founded in 1970 by 30 foundations and associations that pay grants to provide information to foundations and outsiders about the foundations. It currently has 79 members, who all pay grants.

## 5.2. Allocation of assets

This study focuses solely on the investment capital of Finnish foundations and discards other capital that foundations might have. Therefore for example large foundations that focus on providing housing for different groups of people are not included in this study. All real estate owned by foundations that are included in this study should be owned purely for investment purposes and not to carry out the purpose of the foundation.

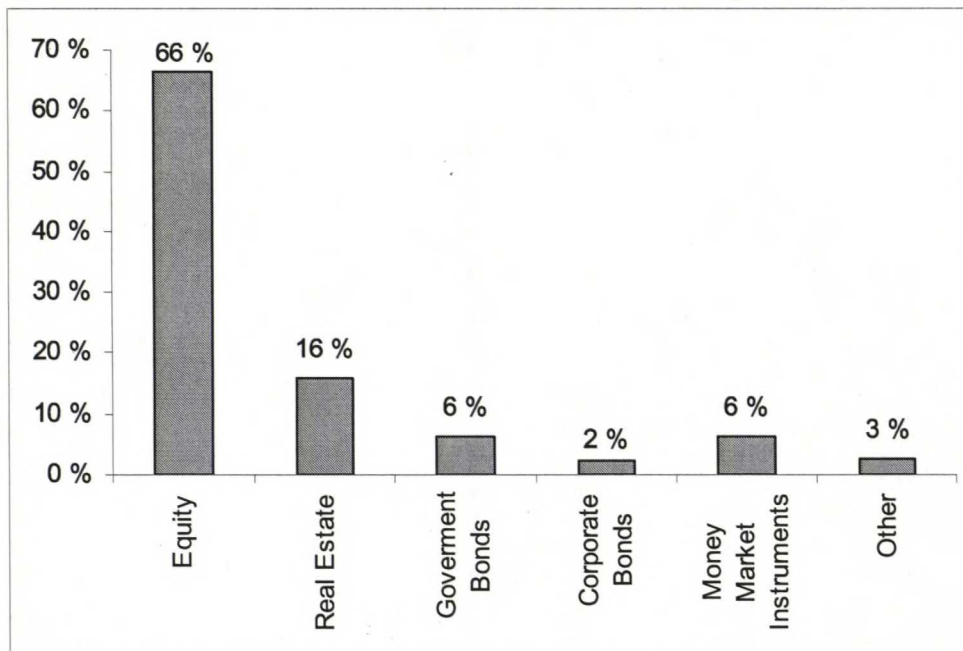
In the first part of this section the study focuses on describing asset allocation of all foundations, where after the foundations are divided into three groups: Small foundations, which have investments worth less than 1 million euros, medium size foundations, which have investments worth between 1 and 5 million euros and large foundations with investments valued at 5 million euros and more. This is done because large foundations dominate the aggregate numbers and might hide differences between different size foundations. In section 5.3 the differences between these groups are summarized.

### 5.2.1 *All foundations*

Figure 4 points out how the investment capital of the foundations is on average allocated between six different investment classes. These include equity, real estate, government bonds, corporate bonds, money market instruments and other, which includes for example asset allocation funds and derivatives. Each asset class includes also mutual funds that correspond best to that particular asset class. As figure 4 shows, shares are by far the single most popular investment class the foundations invest in, since they represent as much as 66 % of all investments the foundations have made. The large share could partly be explained by the fact that most foundations last in perpetuity and therefore as mentioned earlier in section 3.2 there is evidence that equity investment becomes less risky for long-term investors. In addition some foundations have received their shares from donations and are restricted from selling them by terms set by the donors.



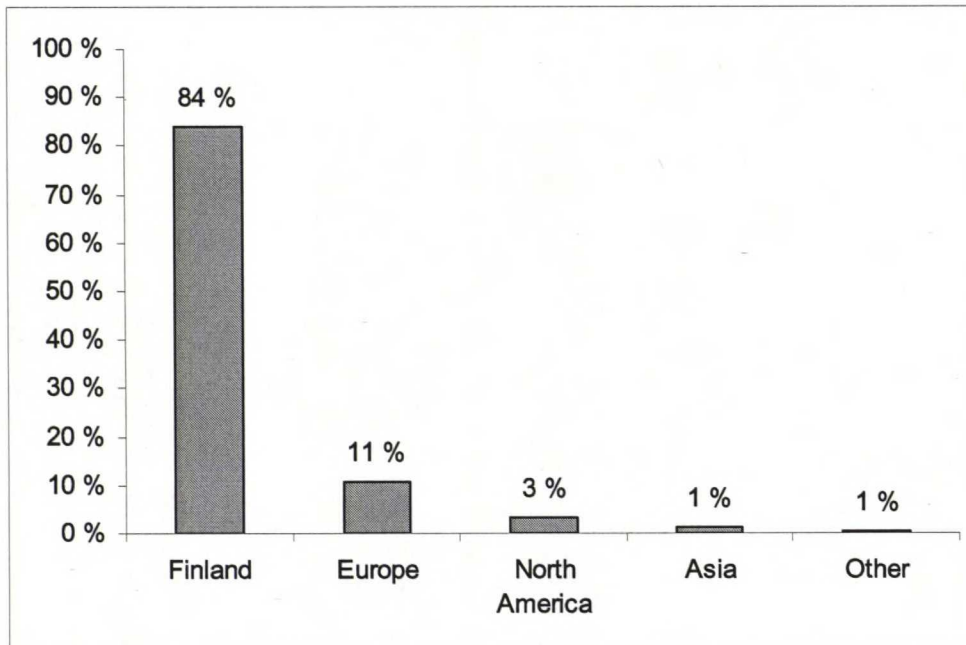
Figure 4: Asset allocation between different asset classes calculated as a weighted average



The second largest investment class is real estate with 16 % followed by government bonds with 6 % and money market instruments with 6 % and corporate bonds with a share of 2 % of all investments. These four count for roughly 30 % of all investment capital meaning that foundations are not very conservative in their investments. These investment classes generally yield steady annual cash flows, which support the favor of steady cash flow hypothesis. The remaining 3 % is allocated in other investment classes such as allocation funds, derivatives and hedge funds.

Figure 5 shows that Finnish foundations are very conservative when it comes to investing outside of Finland. The foundations have allocated as much as 84 % of their investments in Finnish securities and only 11 % in other European securities and as little as 5 % in the remaining parts of the world where North America being the largest equity market in the world has only fractional 3 % share. The reason why only a small portion of foundation investment is outside of Finland is somewhat a mystery.

Figure 5: Geographical asset allocation calculated as a weighted average



The hypotheses that foundations are passive investors might support the result above, as it requires more effort and expertise to invest abroad than to invest domestically. Some foundations have also rules that investments should be made solely or at least for the most part in Finnish Securities. One reason is also that the foundations in this study have invested directly 83 % of their investment capital and only 17 % through mutual funds as figure 6 shows below. Virtually all the direct investments made by the foundations are in Finnish securities so they use mainly among other things mutual funds to invest abroad. This does not, however, explain why Finnish foundations invest so little outside Europe even in developed countries.

Figure 6: Allocation between mutual funds and other investments calculated as a weighted average

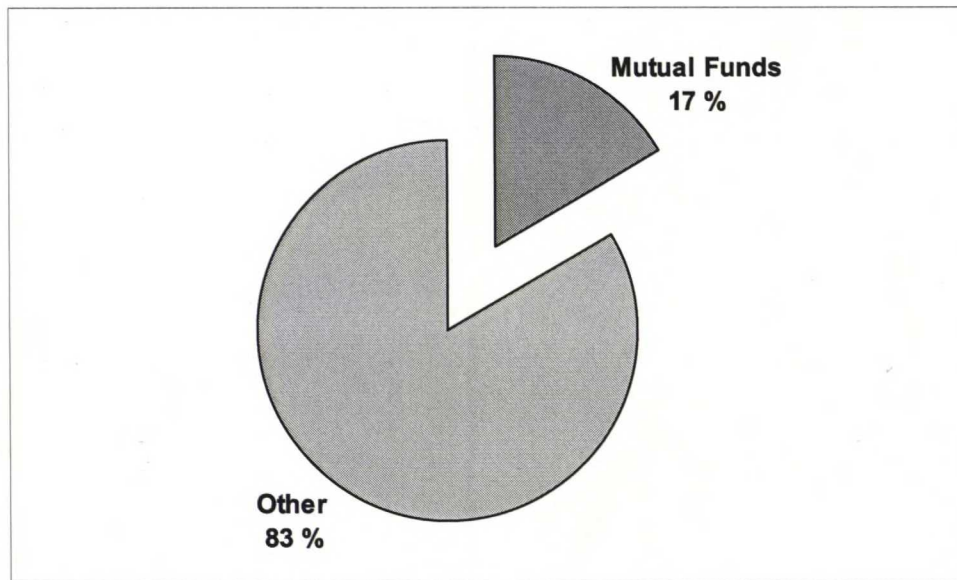
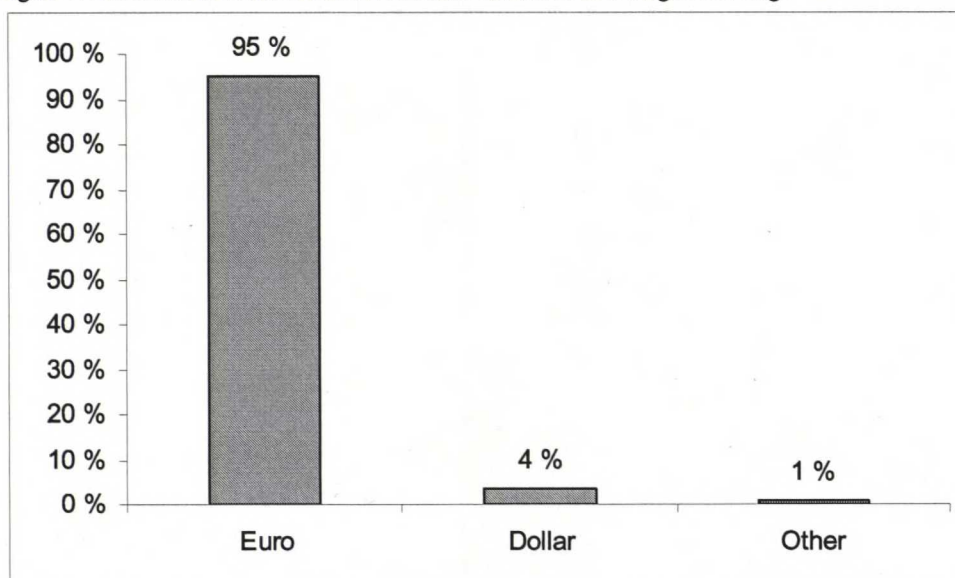


Figure 7 shows asset allocation between currencies and as expected the vast majority of investments are in euros. Euro denominated investments account for as much as 95 % of all investments, the dollar only for 4 % and other currencies only for 1 %. This is because a large part of the investments made by the foundations abroad are made through euro denominated mutual funds and therefore the foreign currencies do not show in the results.

Figure 7: Allocation between different currencies calculated as a weighted average





### 5.2.2. Small foundations with investments under 1 million euros

As figure 1 above showed small foundations represent as much as 57 % of all foundations that disclosed the market value of their investment portfolios in this study. However, the small foundations represent in terms of investments only about 38,5 million euros or 1,6 % of the total investments of the foundations in this study. This means that the smaller foundations have a very low weight in the aggregate figures. Therefore it is worth taking a look at asset allocation for the small foundations alone to see whether it differs from allocation of larger foundations.

Table 2 below shows descriptive statistics of market value of investments, year 2004 income and grants given in 2004 for small foundations. The market value of investments is on average only 0,385 million euros ranging from 16 thousand to 0,95 million euros.

Table 2: Descriptive statistics for small foundations of investments, income and grants given

	Market value of investments	Year 2004 income	Grants paid in 2004
<b>Total</b>	38,5 million €	14 290 000 €	1 910 000 €
<b>Average</b>	0,38 million €	152 000 €	24 000 €
<b>Median</b>	0,4 million €	19 700 €	7 300 €
<b>Mode</b>	0,2 million €	20 000 €	4 000 €
<b>Minimum</b>	0,016 million €	0 €	0 €
<b>Maximum</b>	0,95 million €	10 000 000 €	590 000 €
<b>St. Dev.</b>	0,26 million €	1 030 000 €	76 000 €
<b>N</b>	100	94	78

In year 2004 income was on average 152 thousand euros ranging from 0 € to as much as 10 million euros. The reason for the maximum income to be that high is that the main source of income to some foundations comes from elsewhere than investments. In fact, as figure 8 below illustrates for smaller foundations in this study only 12 % of income came in 2004 from investments and as much as 83 % came from other sources. However, this figure is skewed by a few very large observations and does not necessarily present how income is distributed for the majority.

Small foundations pay as it can be seen in table 2 quite small grants. The average is only 24 000 euros ranging from 0 to 590 000 euros. As it can be seen from table 1, this is compared to yearly

income, relatively less than foundations as an aggregate give. One reason for this is that some of the higher income foundations in the small foundations group do not pay grants.

Figure 8: Distribution of income for small foundations in year 2004 between investment returns, donations and other income calculated as an income weighted average

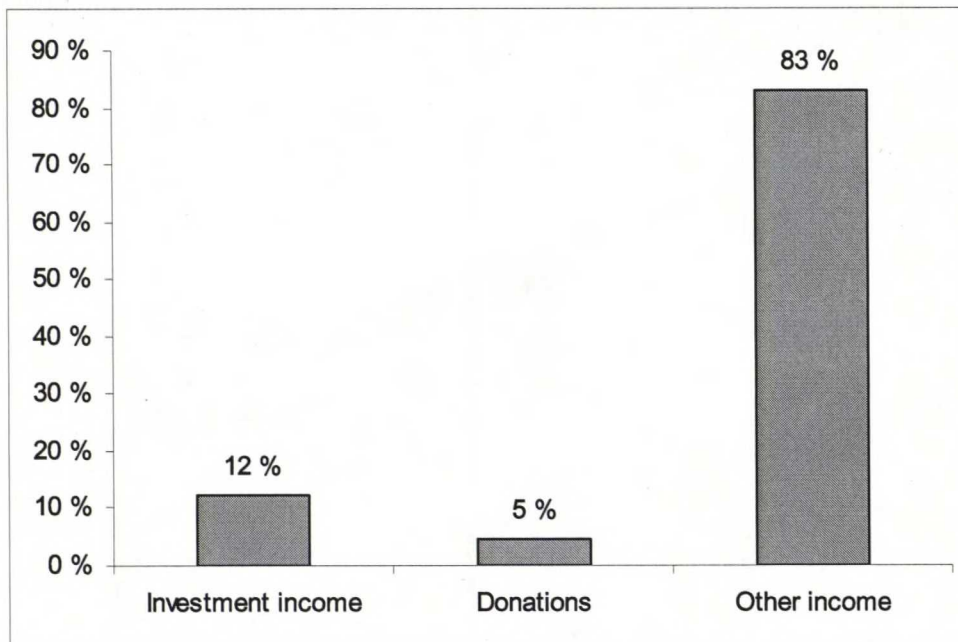


Figure 9 below shows how foundations with investments under 1 million euros have on average allocated their assets. As it can be seen from the figure, equities are the single most popular investment class representing 47 % of all investments followed by real estate, money market instruments and government bonds, each with about 15 % share. Corporate bonds have only a 2 % share and other investments a 6 % share. What is interesting is that it seems that small foundations have invested relatively less in shares and more in fixed income than foundations as an aggregate. Another interesting point seems to be that money market instruments have a relatively large share. This would indicate that some foundations do not invest long-term but rather short term. This would for example be the case if a foundation lives from hand to mouth. The differences between foundations of different sizes will be summarized in more detail in section 5.3.

Figure 9: Asset allocation between different asset classes for small foundations calculated as a weighted average

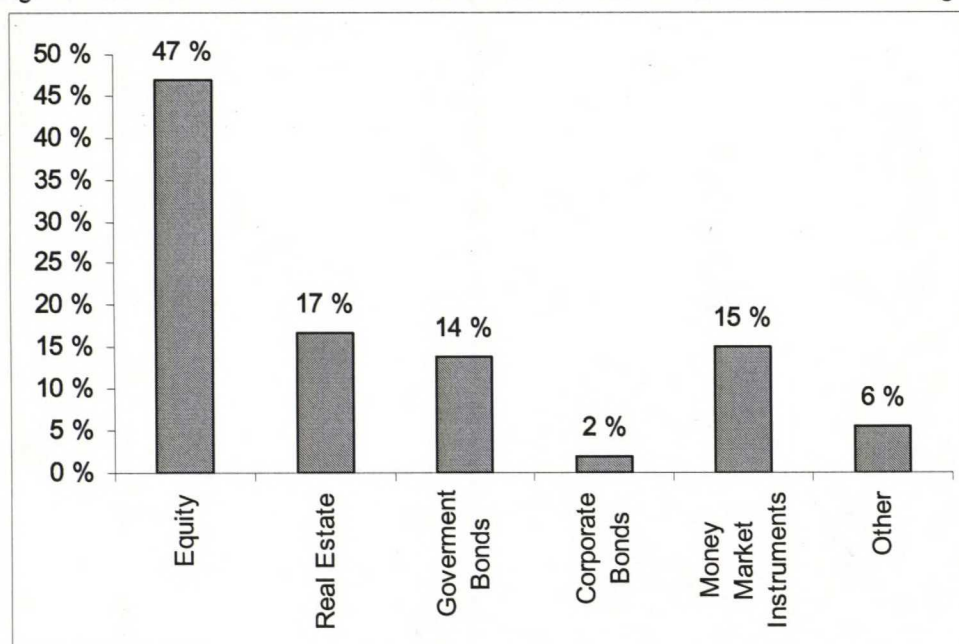
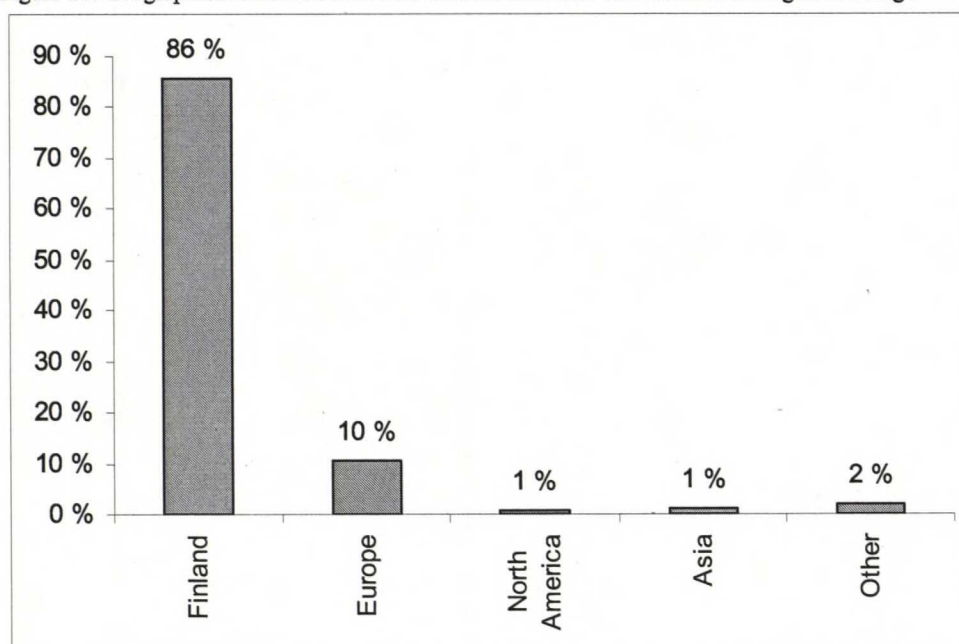


Figure 10 below shows how the investments of small foundations are allocated geographically. The small foundations have allocated as much as 86 % in Finnish securities and only 10 % in European securities. The remaining 4 % is allocated in the rest of the world. These results seem to be inline with the aggregate numbers shown in figure 5 above.

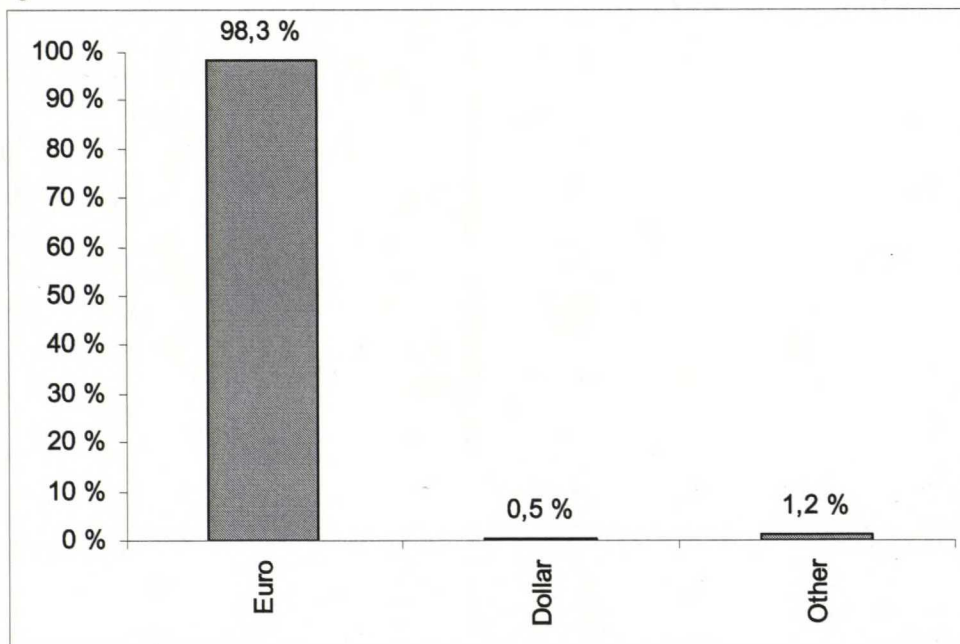
Figure 10: Geographical asset allocation for small foundations calculated as a weighted average





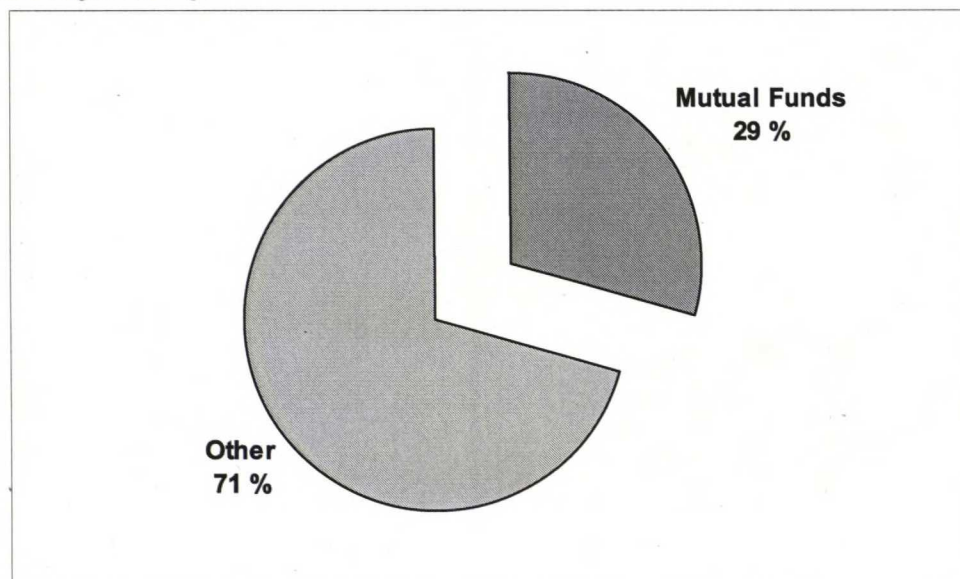
As the investments of small foundations are allocated mostly in Finland and the rest of Europe, the results of asset allocation between different currencies illustrated in figure 11 are not surprising. Nearly all investments made by the small foundations are in the euro currency. One reason for the number to be so high is that many mutual funds used by foundations to invest abroad are euro denominated.

Figure 11: Allocation between different currencies for small foundations calculated as a weighted average



The proportion of mutual funds for the smaller foundations, according to figure 12, seems to be higher than for the entire sample seen in figure 6 above. For the small foundations almost 30 % of all investments are allocated in mutual funds whereas the relative proportion for the entire sample was only 17 %. This might be explained partially by the fact that larger foundations have better possibilities to invest directly than smaller foundations. For smaller foundations it can be too expensive for example to invest directly abroad or to form an adequately diversified portfolio. Larger foundations might even have people working full time on their investments, whereas many smaller foundations have no possibilities to do this. All these and also other reasons favor investing in mutual funds. The differences in asset allocations between different sizes of foundations will be summarized in section 5.3.

Figure 12: Allocation between mutual funds and other investments for small foundations calculated as a weighted average



### 5.2.3. Medium size foundations with investment between 1 and 5 million euros

There are 43 medium size foundations included in this study, which represents about 25 % of all foundations that disclosed the market value of their investment portfolios. However, the total market value of these medium size portfolios stands for only 4 % of the market value of all foundations. As it was in the case for small foundations, the weight of medium size foundations in the aggregate numbers is very low and therefore it is worthwhile looking at asset allocations for medium size foundations alone.

Table 3: Descriptive statistics for medium size foundations of investments, income and grants given

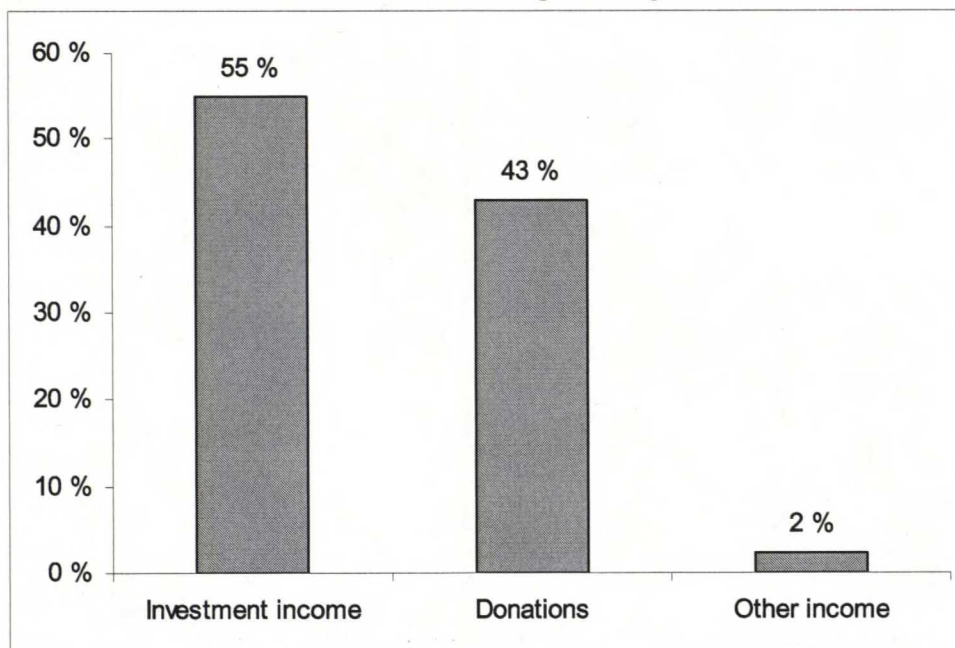
	Market value of investments	Year 2004 income	Grants paid in 2004
<b>Total</b>	98 million €	8 970 000 €	2 720 000 €
<b>Average</b>	2,2 million €	224 000 €	82 600 €
<b>Median</b>	2 million €	115 500 €	25 700 €
<b>Mode</b>	1 million €	50 000 €	10 000 €
<b>Minimum</b>	1 million €	16 €	6 000 €
<b>Maximum</b>	4,5 million €	2 500 000 €	1 300 000 €
<b>St. Dev.</b>	1,1 million €	458 000 €	224 000 €
<b>N</b>	44	40	33

Table 3 above shows descriptive statistic for medium size foundations on market value of investments, year 2004 income and grants given in 2004. The average market value is about 2,2 million euros and the median 2 million euros. Year 2004 income was on average 224 thousand euros, which is not much higher for the medium size foundations than for the small foundations seen in table 2. This is because some small foundations in terms of market value of investments have high income from other sources than investments. These types of foundations have usually very small investment portfolios and are therefore only included in the small foundations group, which increases the average income for small foundations relative to larger ones.

When looking at grants paid, the medium size foundations on average paid 82,6 thousand euros in year 2004. This is substantially more than the small foundations paid in 2004, although their average year 2004 income was almost as high as it was for the medium size foundations.

Figure 13 below illustrates how in 2004 income was distributed for medium size foundations between investment income, donations and other income. Compared to small foundations these foundations receive significantly more income from investments and donations and on the other hand considerably less from other sources of income.

Figure 13: Distribution of income for medium size foundations in year 2004 between investment returns, donations and other income calculated as an income weighted average

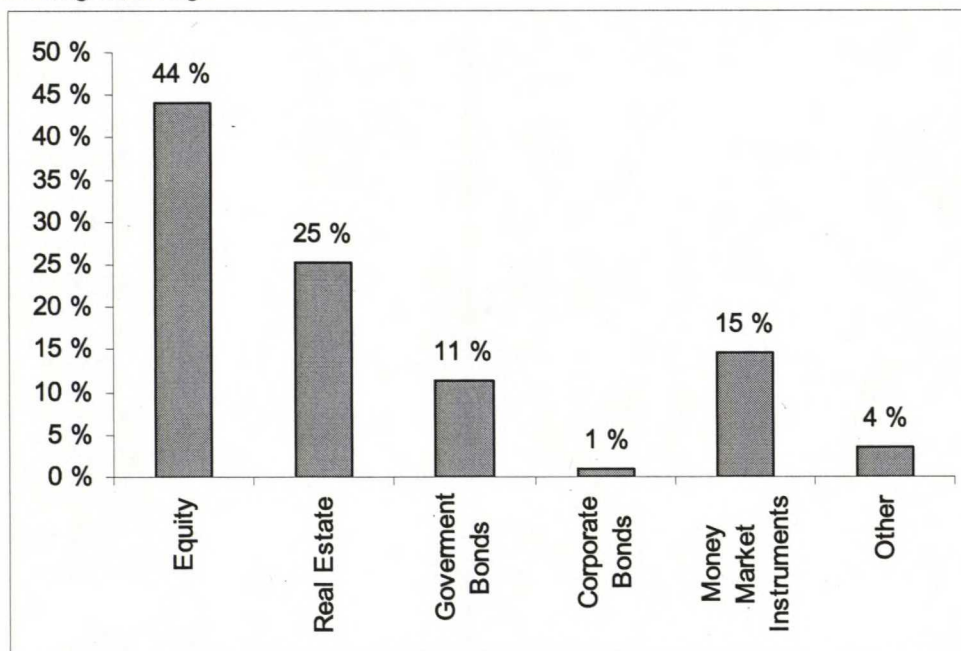




What is notable for the distribution in figure 13 is the relatively large share of donations as they count for as much as 43 % of all income in year 2004. However, since the figure does only show the distribution of income for one year, it is not possible to draw any solid conclusions from this result without examining a longer period of time.

Asset allocation for medium size foundations between different assets classes is illustrated in figure 14 below. It can be seen that the allocation is very similar to the one the smaller foundations have. This means that asset allocation for the medium size foundation differ somewhat from the entire sample allocation shown in figure 4 above. The most significant difference seems to be in equity holdings, where medium size foundations have allocated 44 % into compared to the entire sample, where 66 % is allocated into equity.

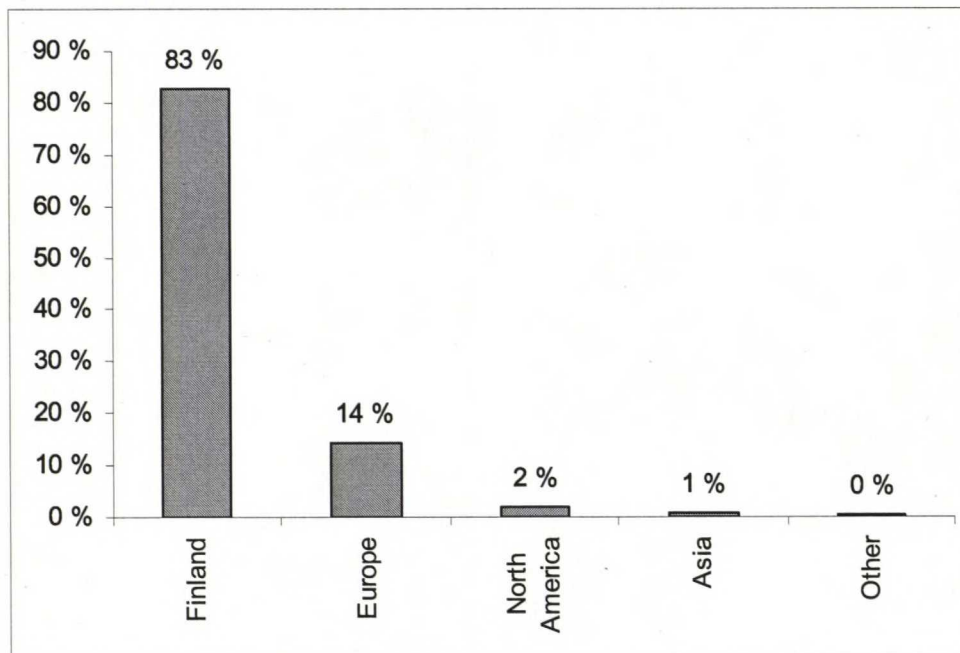
Figure 14: Asset allocation between different asset classes for medium size foundations calculated as a weighted average



There is also a quite significant difference in real estate and money market instrument holdings compared to the entire sample. The medium size foundations have about 9-percentage points higher ownership in these asset classes than all the foundations have on average. This means that the small and medium size foundations should differ, when it comes to asset allocation between different asset classes, quite significantly from the large foundations.

When looking at the geographical allocation of assets in figure 15 below, it is possible to see that medium size foundations do not differ much from the small foundations or from all foundations in general. The bulk of investments of medium size foundations are made in Finland and only 14 % are made in the rest of Europe. Medium size foundations seem to be according to these results very reluctant to invest outside of Europe as only 3 % of their investments are made in the remaining parts of the world.

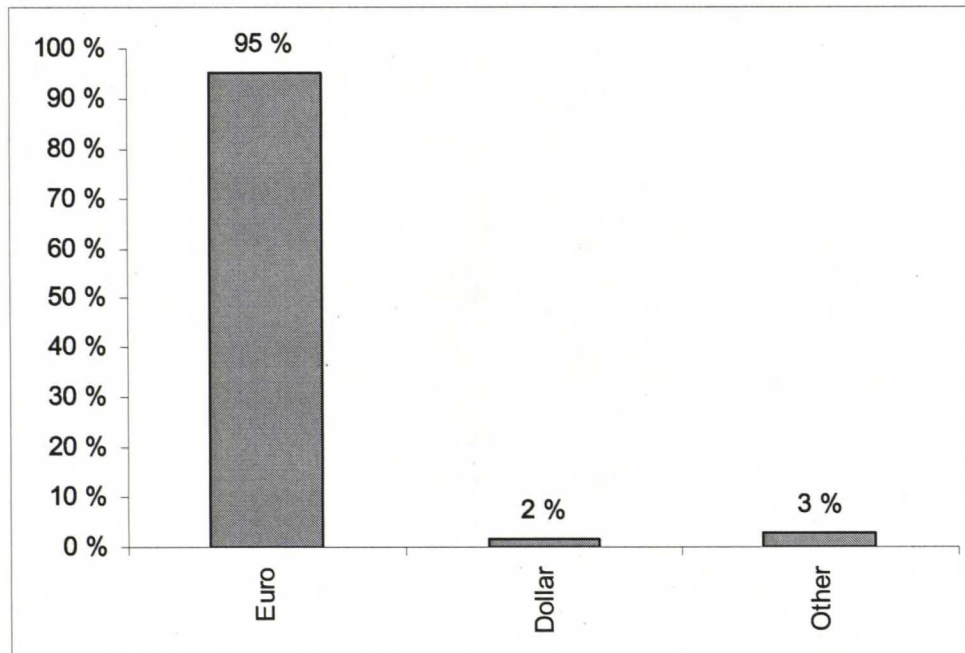
Figure 15: Geographical asset allocation for medium size foundations calculated as a weighted average



The results in figure 15 are somewhat confusing, as the allocations do not seem to differ from the smaller foundations. It could be expected that as the size of the foundations increases also the willingness and interest of the foundations to invest abroad would increase, since their awareness of the importance of investment decisions might increase.

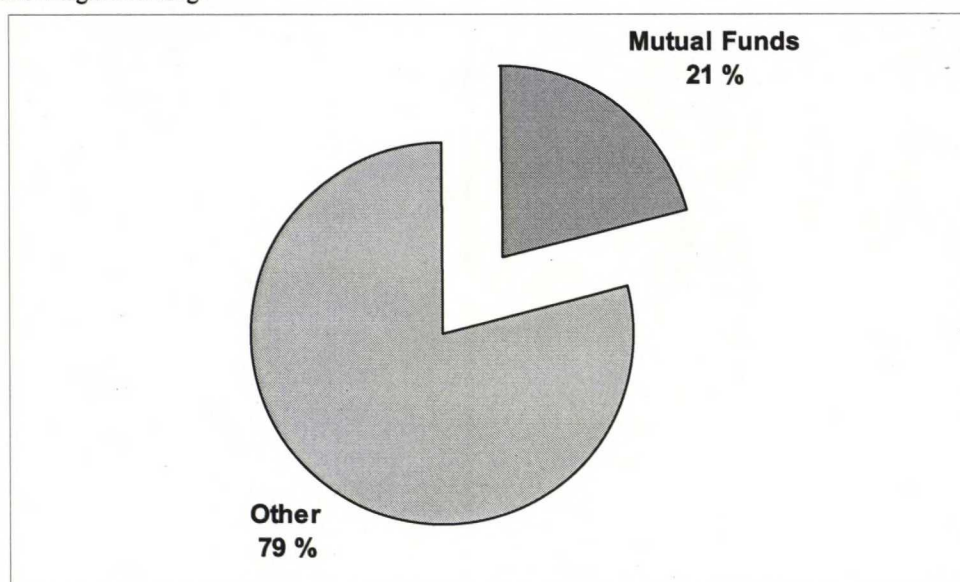
Allocations between different currencies for the medium size foundations can be seen in figure 16 below. The results are not surprising at all when compared to the geographical allocation results in figure 15 above. The euro currency dominates the currency allocations with about 95 % share of all investments. The dollar has a marginal 2 % share of all investments and rest of the currencies as little as a 3 % share.

Figure 16: Allocation between different currencies for medium size foundations calculated as a weighted average



The allocation between mutual funds and other investments is displayed in figure 17 below. The share of mutual funds is somewhat lower than it was for the small foundations but again higher than for the whole sample. This might indicate that the share of mutual funds decreases on average as the size of a foundation in terms of investments increases.

Figure 17: Allocation between mutual funds and other investments for medium size foundations calculated as a weighted average





### 5.2.3. Large foundations with investment of 5 million euros and above

In the final group of foundations are included all foundations with investments of five million euros and above. There were only 31 respondents in this group, but the total market value of investments was as much as 2,278 billion euros. This means that the larger foundations represent nearly 95 % of all investments in this study. This is very significant considering that in terms of number of foundations this group represents only 17 % of all respondents therefore being clearly the smallest group.

Table 4: Descriptive statistics for large foundations of investments, income and grants paid

	Market value of investments	Year 2004 Income	Grants paid in 2004
<b>Total</b>	2278 million €	269 540 000 €	53 500 000 €
<b>Average</b>	73,5 million €	8 700 000 €	1 980 000 €
<b>Median</b>	14,8 million €	1 072 000 €	550 000 €
<b>Mode</b>	8,9 million €	800 000 €	N/A
<b>Minimum</b>	5 million €	148 736 €	0 €
<b>Maximum</b>	871 million €	74 800 000 €	24 800 000 €
<b>St. Dev.</b>	174 million €	17 430 000 €	4 986 000 €
<b>N</b>	31	31	27

Table 4 above clearly shows that the final group of foundations is substantially larger than the two earlier groups. As mentioned already the combined market value of investments for these foundations was about 2,278 billion euros. That is almost 24 times more than the next largest group. The average value of investments was about 73,5 million euros ranging from 5 million to 871 million euros. The median is quite lower being only about 14,8 million euros. The rather large gap between the arithmetic average and median is due to a very large range in the market value of investments. In fact, the five largest foundations in this study are considerably larger than the rest of the foundations as it can be seen in table 5 below. Their combined investments represent 83 % of the large foundations group and as much as 78 % of all foundations. Based on these results it is very obvious that only a small minority of foundations in Finland hold the vast majority of investment assets of all Finnish foundations.

In terms of income the five largest foundations in this study do not represent such a large share than in the case of investments. This result is logical, since many foundations with small investment might have other sources of income than investment income. The real number for the

whole population is probably even lower when such foundations like foundations providing rental apartment that were excluded from this study are included, since foundations like this have very little or no investments but still have high income.

When looking at the share of grants the five largest foundations paid out in 2004, the results are similar to the share of investments. The five largest foundations in this study paid 79 % of all grants that the foundation with investments of five million euros and above paid and 73 % of grants paid by all foundations that participated this study.

Based on these results it seems that a small minority of foundations in Finland dominate both the amount of grants paid annually as well as the amount investments controlled by Finnish foundations. It is completely logical that foundations with the largest investments pay the largest grants since they usually have the best resources to do this in the long run.

Table 5: Market value of investments, income and grants paid for the five foundations with the largest investment portfolios in this study. In addition combined values for the five foundations and their share of the values of the group of large foundations and all foundations in this study.

Foundation	Market value of investments	Year 2004 income	Grants paid in 2004
1	871 million €	74 800 000 €	24 800 000 €
2	375 million €	16 400 000 €	8 600 000 €
3	319 million €	10 251 443 €	1 230 400 €
4	250 million €	17 900 000 €	7 000 000 €
5	65 million €	8 200 000 €	550 000 €
<b>Total</b>	1880 million €	127 551 443 €	42 180 400 €
<b>% of large foundations</b>	83 %	47 %	79 %
<b>% of all foundations</b>	78 %	44 %	73 %

Figure 18 below shows how income in year 2004 for the large foundations was distributed between investment income, donations and other income. Investment income is the largest source of income, although other sources of income are also quite significant. Donations are clearly the smallest source of income. However, since the figure shows the income distributions only for one year, it is not possible to make solid conclusions from these results. The figure can be used to get a rough estimate on how income might be distributed. Donations for example might be volatile from year to year depending on many external factors.



Figure 18: Distribution of income for large foundations in year 2004 between investment returns, donations and other income calculated as an income weighted average

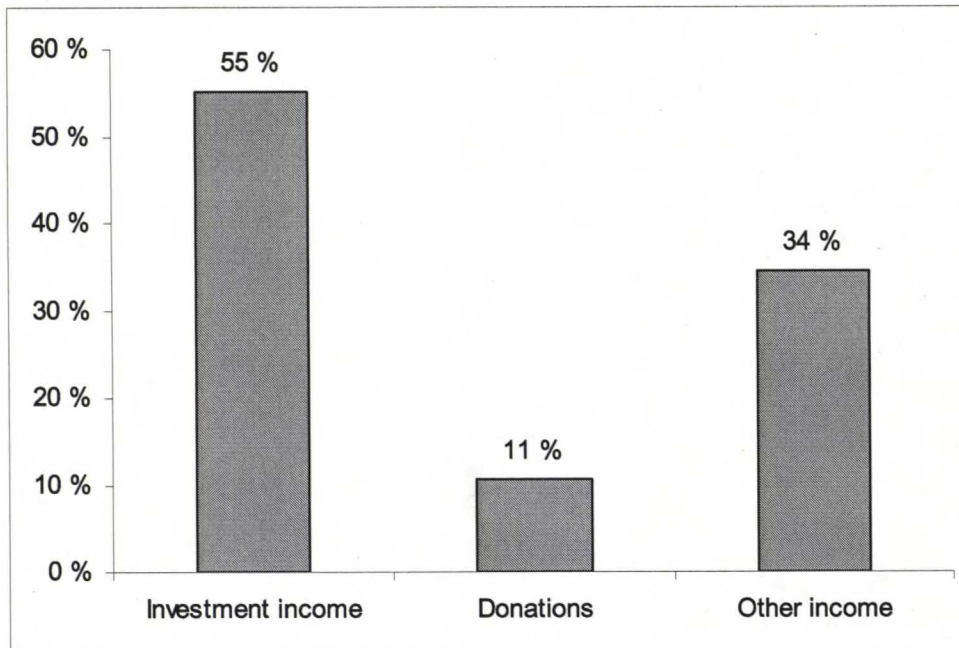


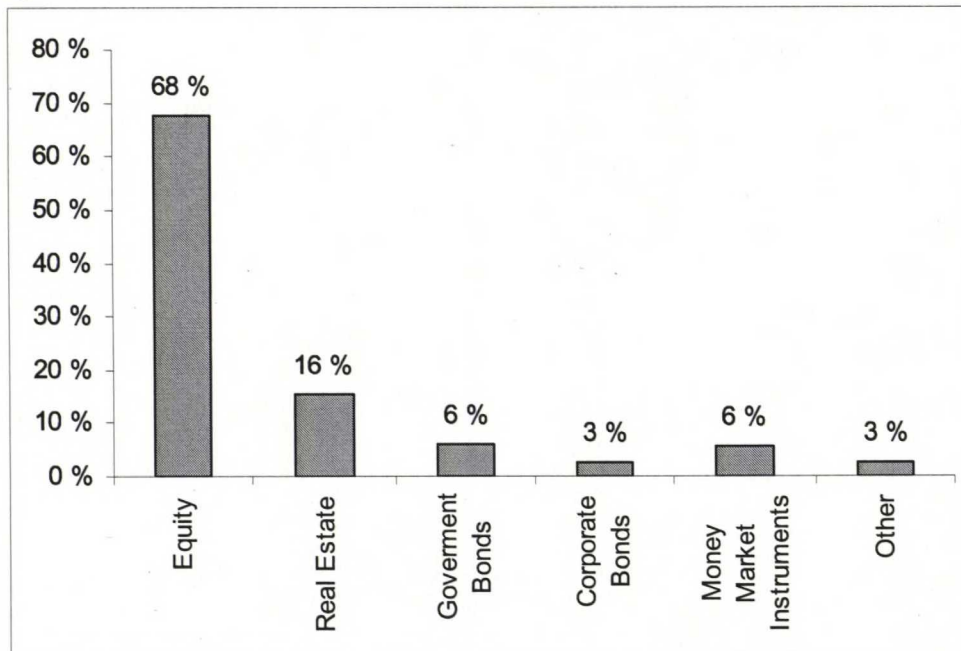
Figure 19 below illustrates asset allocation for large foundations between six different asset classes. Equity investments are according to the figure clearly the most utilized asset class as it was the case with small and medium size foundations. The difference between equity and other asset classes seems to be even bigger for the large foundations than the smaller ones. According to the results in figure 19 the second most utilized asset class was real estate accounting for 16 percent of all investments. The rest of the asset classes are clearly less popular. Government bonds and money market instruments account each only for six percent of all investments and corporate bonds and other investments account each for as little as three percent of all investments.

It seems according to the results shown in figure 19 that large foundations are willing to take more risk than smaller foundations as they have larger stakes in equities and smaller stakes in less risky assets such as government bonds and money market instruments than the smaller foundations.

Altogether the allocations for different groups of foundations seem to be similar, although there are differences in the amount invested in different asset classes.



Figure 19: Asset allocation between different asset classes for large foundations calculated as a weighted average



The results from the geographical asset allocation for large foundations are shown in figure 20 below. The results are very similar to the geographical allocations for small and medium size foundations. The majority of investments of large Finnish foundations are directed towards Finland and only 11 % in other European countries. The remaining 6 percent is spread quite evenly throughout the rest of the world.

The results are somewhat surprising as it could have been assumed that the large foundations would at least to some extent invest more abroad than the smaller foundations on average. The large foundations should have at least better possibilities to invest abroad, since they have better and larger resources. An explanation might be that foundations are not allowed either by their own rules or by the terms set by donors to invest outside of Finland or the foundations are at least obligated to favor Finnish investments. One reason might also be that Finnish foundations feel that they should favor Finland in their investments choices.

One future research topic could be why foundations in general and even larger foundations do not invest more abroad than they currently do. After all the foundations are required to invest in a safe and profitable way but they have at least not taken any big measures in diversifying geographical risk.

Figure 20: Geographical asset allocation for large foundations calculated as a weighted average

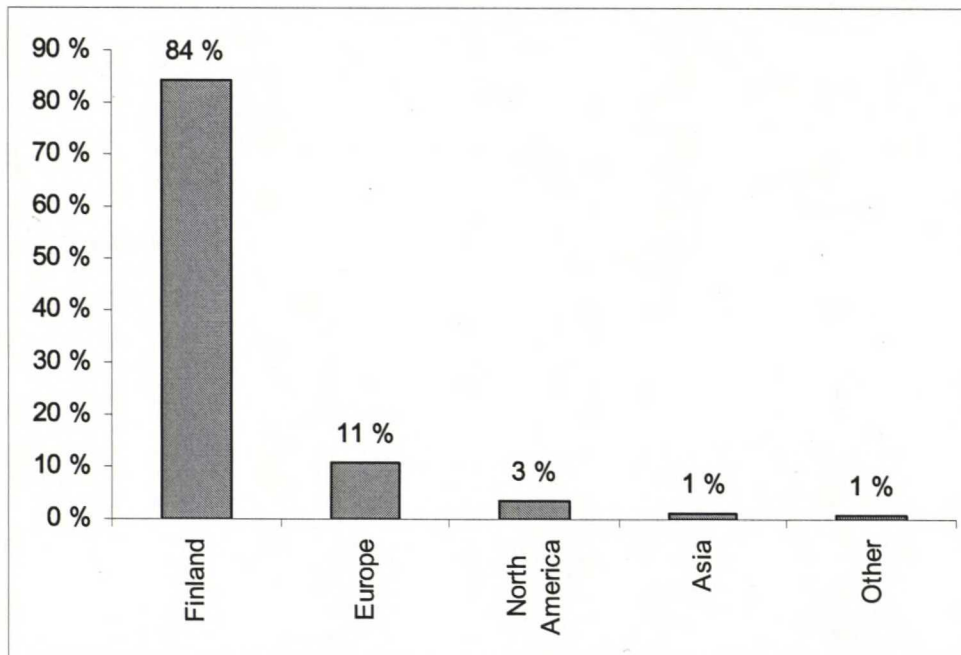


Figure 21 illustrates the allocation of investments between different currencies. It is no surprise that the results are very close to the earlier results for small and medium size foundations, because the geographical allocations were very close to each other as mentioned above.

Figure 21: Allocation between different currencies for large foundations calculated as a weighted average

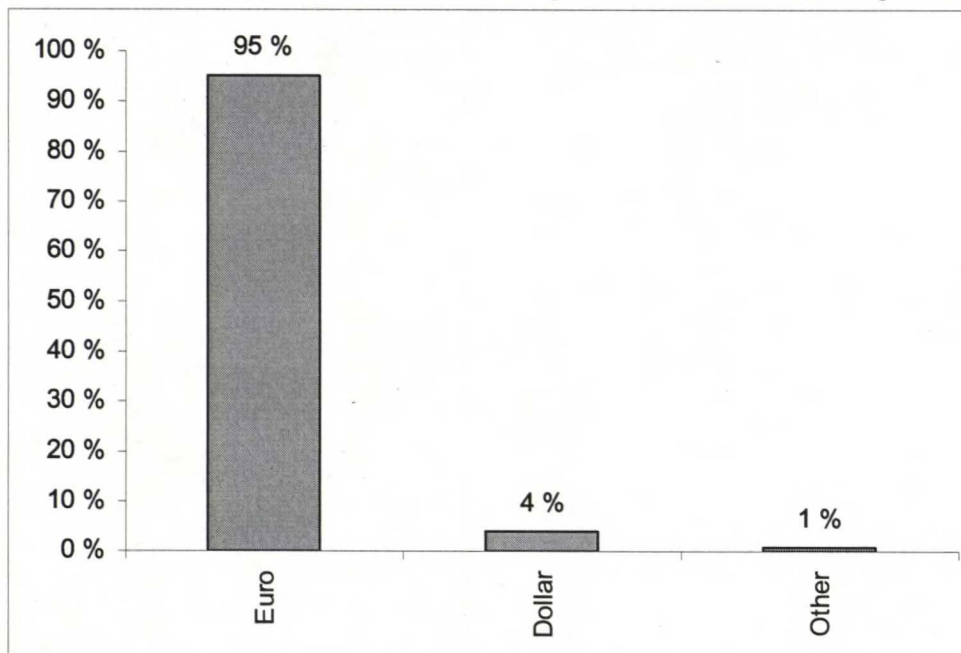
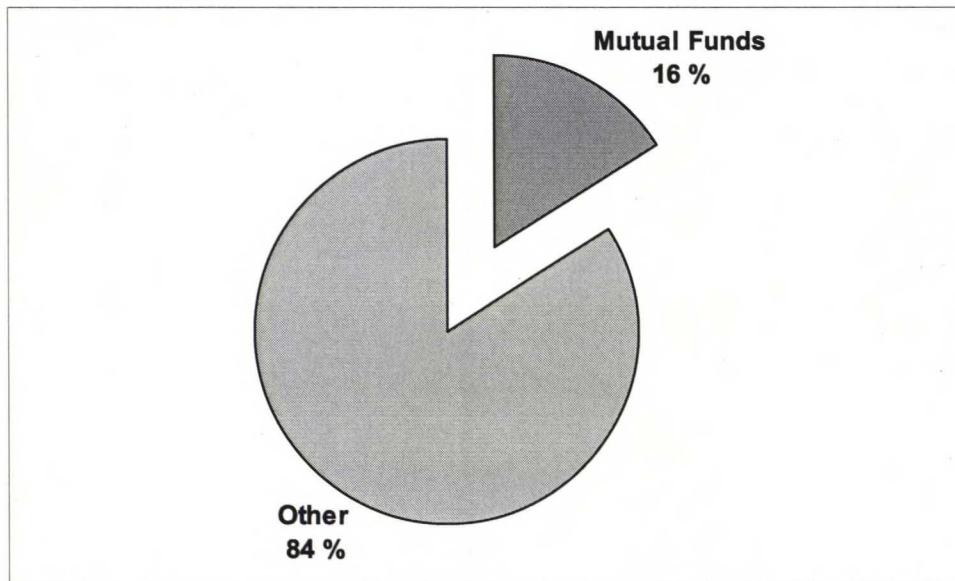


Figure 22 below illustrates how investments for large foundations are allocated between mutual funds and other investments. Mutual funds represent only 16 percent of all investments, which is less than it was for both small and medium size foundations. The share of mutual funds seems to decline as the size of foundations increase. This could result from the assumption that larger foundations have better opportunity than smaller foundations to invest directly. For small foundations it can be too expensive to form a well-diversified portfolio through direct investments and therefore mutual funds might be more attractive for small foundations. Large foundations, on the other hand, have better possibilities and resources to invest directly without too high costs.

Figure 22: Allocation between mutual funds and other investments for large foundations calculated as a weighted average



### 5.3. Summary of differences between different size foundations in asset allocation

The previous sections showed asset allocation for different size Finnish foundations. This section summarizes those results comparing asset allocation, geographical asset allocation, asset allocation between different currencies and asset allocation between mutual funds and other investments for small foundations with investment under 1 million euros, medium size foundations with investments between 1 and 5 million euros and large foundations with investments over 5 million euros. The reason to compare different size foundations is because the



largest foundations have a very large weight in the aggregate figures which means they dominate the results. By dividing the sample into three groups, it is possible to see allocations for smaller foundations which otherwise would be impossible due to their insignificant weight in the whole sample.

Figure 23 below shows asset allocation for the three different sized foundation groups. According to the figure large foundations seem to invest more in equity and less in fixed income instruments than small and medium size foundations. Large foundations have invested as much as 68 % in equity whereas small foundations have only 47 % and medium size foundations 44 %. The allocations for small and medium size foundations seem to be quite similar although it looks like medium size foundations have a slightly larger weight in real estate.

Figure 23: Asset allocation for small (investment under 1 million euros), medium size (investments between 1 and 5 million euros) and larger foundations (investments over 5 million euros)

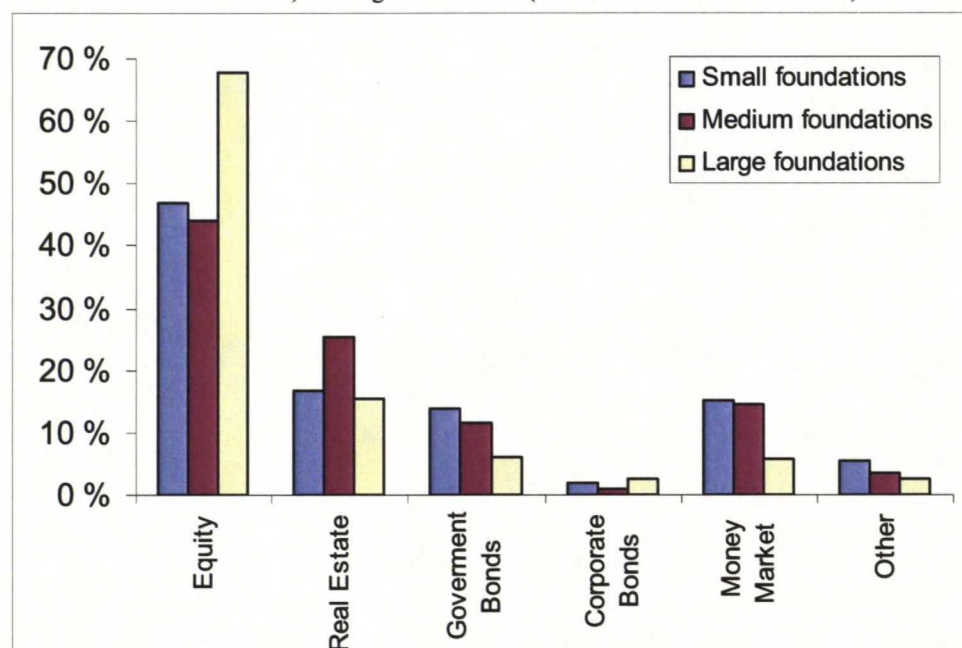


Figure 24 below illustrates the geographical asset allocation for the three different groups. As the figure shows Finland dominates geographical allocation for all three groups. Almost 90 % of all investments are made in Finnish securities. The foundations are very similar also in investments abroad as there seems to be virtually no differences between different sized foundations.

Figure 24: Geographical asset allocation for small (investment under 1 million euros), medium size (investments between 1 and 5 million euros) and larger foundations (investments over 5 million euros)

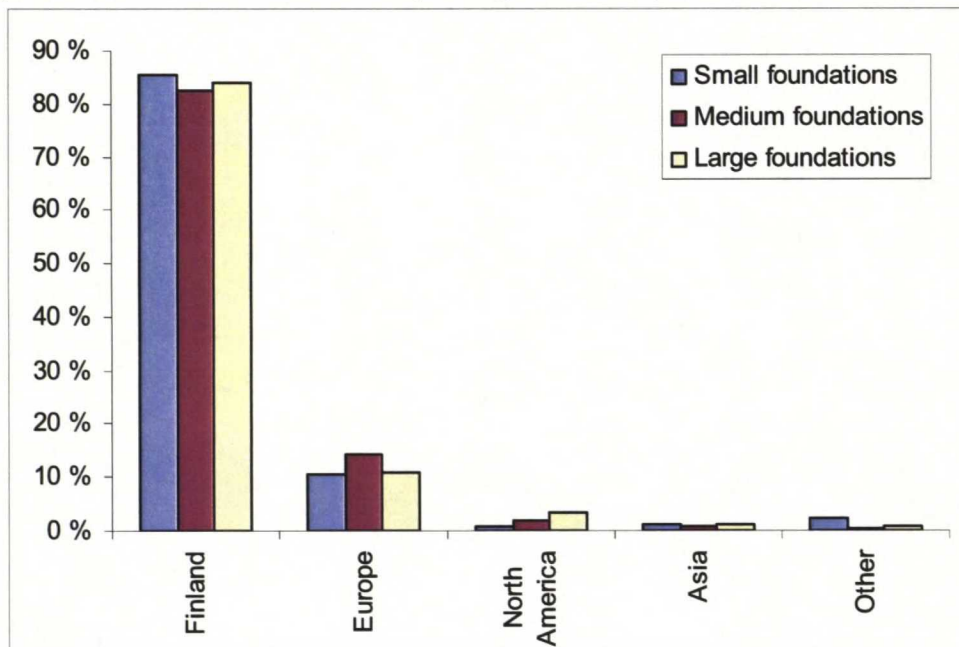
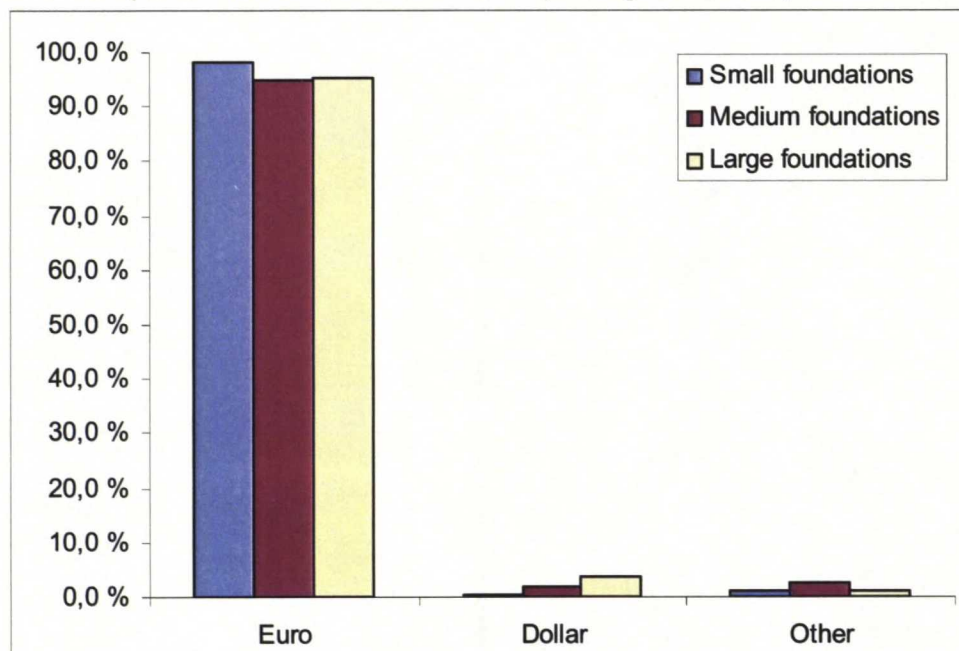


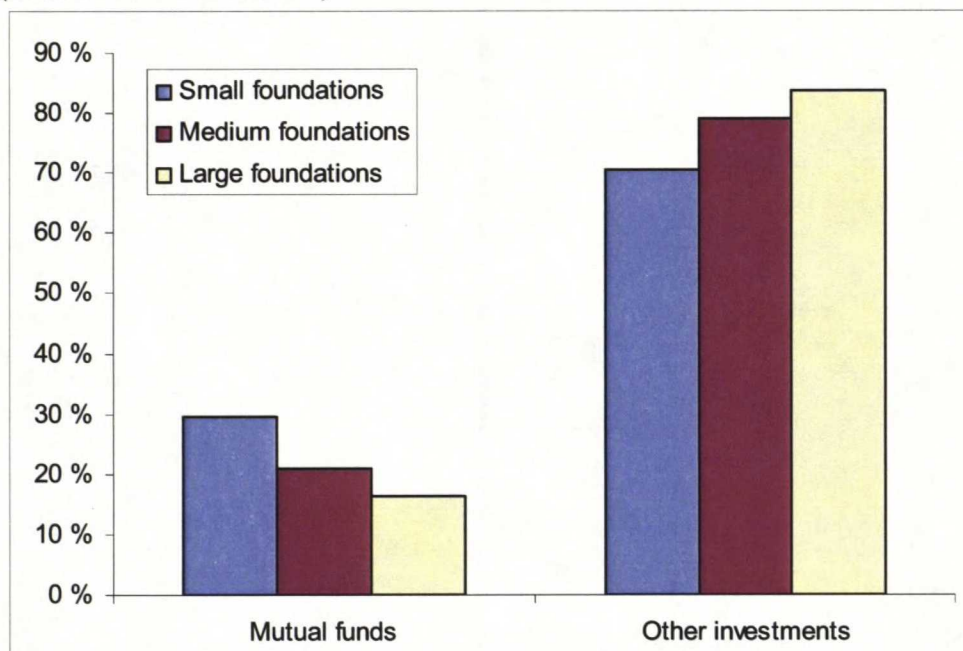
Figure 25 shows the allocation between different currencies. The results are very logical when compared to those of geographical allocation as the euro currency dominates the investments of different size foundations.

Figure 25: Asset allocation between different currencies for small (investment under 1 million euros), medium size (investments between 1 and 5 million euros) and larger foundations (investments over 5 million euros)



Finally, figure 26 below demonstrates how foundations of different size have allocated their investments between mutual funds and other investments. It looks like smaller foundations invest relatively more in mutual funds than larger foundations. In fact, it seems that the proportion of mutual funds declines as the foundations become larger as the large foundations have the smallest proportion of mutual funds.

Figure 26: Asset allocation between mutual funds and other investments for small (investment under 1 million euros), medium size (investments between 1 and 5 million euros) and larger foundations (investments over 5 million euros)



#### 5.4. The investment policies of foundations are conservative

According to the first hypothesis made in this study, investment policies of foundations should be conservative since Finnish foundations are required by the Foundations act to invest their assets in a secure and profitable way. In addition many foundations rely largely on the revenue generated from their investments and cannot therefore take too much risk if there is a change that this could jeopardize the whole existence of the foundation. After all the purpose of the foundation cannot be to make profits but to help the society. Foundations are non-profitable organizations, which use their investments as a mean to carry out their purpose.



In table 6 below it is possible to see the distribution of the foundations' opinions on eleven different statements related to investments. The table shows vividly that in the two first statements the first hypothesis seems to be true. As many as 94 % of all foundations consider a low risk investment either important or very important and 96 % consider securing the value of their investments either important or very important. The strength of the opinions are also very high as 60 % of all foundations regard securing the value of their investments as very important and 44 % regard a low risk investment very important.

Table 6: The average distribution of the foundations' opinions to different statements. The can't say column includes also answers that have been left empty.

	Very important	Important	Less important	Not important	Cannot say
<b>Low risk investments</b>	44 %	50 %	2 %	0 %	4 %
<b>Securing the value of investments</b>	60 %	36 %	1 %	1 %	3 %
<b>Long-term investments</b>	19 %	47 %	23 %	3 %	7 %
<b>Use of derivatives</b>	1 %	2 %	20 %	43 %	34 %
<b>Use of insurance</b>	13 %	14 %	9 %	29 %	35 %
<b>Diversification within an asset class</b>	16 %	34 %	19 %	9 %	23 %
<b>Diversification between asset classes</b>	22 %	34 %	18 %	7 %	20 %
<b>Geographical diversification</b>	3 %	17 %	33 %	23 %	24 %
<b>Sector/industry diversification</b>	4 %	42 %	21 %	10 %	23 %
<b>Restricting the weight of one asset</b>	8 %	41 %	22 %	7 %	22 %
<b>Investing in a large well known company</b>	5 %	35 %	35 %	15 %	10 %

Virtually no foundation considers the two first statements meaningless since only two percent thinks that a low risk investment is less important and only two percent view securing the value of their investments as less important or not important at all.

The opinions are not as strong for the rest of the statements, although some are clearly stronger than others. On average 66 % of foundations consider long-term investments either important or very important and only 27 % less important or not important at all. The result is quite logical since most foundations last in perpetuity and use only the annual income they receive from their investments and not any proceeds from selling their assets. Also if the foundations are conservative as investors they should have long investment horizons when investing in risky assets such as equity.

Derivatives are not important for foundations in Finland according to the results shown in table 6. Only three percent of the foundations that replied consider the use of derivatives important or

very important and as many as 63 % less important or not important at all. One notable thing is the high number of empty or cannot say answers. This result might indicate that foundations in general are not very familiar with derivatives and do not consider them important in securing their investments.

The importance of using insurance for example for real estate cannot be precisely interpreted since 27 % consider it either very important or important, 38 % regard it less or not at all important and 35 % cannot say or have left this unanswered. The results most likely reflect the foundations' asset allocations. The foundations that own real estate (as an investment) might consider insurance more important than foundations that do own real estate.

If foundations would be conservative and careful as investors, it could be assumed that they would consider diversification important. Diversification within an asset class is either important or very important for 50 % of all foundations and less or not important for 27 % of all foundations. Diversification between asset classes is considered either important or very important by 56 % of all foundations and less or not important by 24 % of all foundations. Geographical diversification is regarded as important or very important by only 20 % and less or not important by 56 % of all foundations. Finally, sector/industry diversification is important or very important for 46 % and less or not important for 31 % of all foundations. It is notable that to these questions between 20 and 24 % either did not answer at all or answered cannot say. The result for the rather low importance of geographical diversification is quite rational, since Finnish foundations make most of their investments into Finnish securities as figure five earlier clearly illustrated. Foundations do not seem to consider geographical diversification very important.

Restricting the weight of one asset is important or very important for 49 % of all foundations and less or not important for 29 % of all foundations. Again, the proportion of empty or cannot say answers is relatively high at 22 % of all answers.

Finally, there seems not to be a clear answer to whether foundations find it important or not to invest in large a well-known companies as 40 % regard it important or very important and 50 % less or not important.



Table 7 below summarizes the results shown in table 6 by adding the “very important” and “important” columns together and by adding the “less important” and “not important” together. The table shows also the statistical significance of the differences between the “important” and “unimportant” opinions for each 11 statements.

Table 7: In this table the “very important” and “important” columns from table 6 are combined into one column called “important” and the “less important” and “not important” columns are combined into one column called “unimportant”. The p-value column shows the significance of the difference between these two opinions for each of the 11 statements.

	Important	Cannot say	Unimportant	p-value
<b>Low risk investments</b>	94 %	4 %	2 %	0,000
<b>Securing the value of investments</b>	95 %	3 %	2 %	0,000
<b>Long-term investments</b>	66 %	7 %	27 %	0,000
<b>Use of derivatives</b>	3 %	34 %	63 %	0,000
<b>Use of insurance</b>	27 %	35 %	38 %	0,076
<b>Diversification within an asset class</b>	50 %	23 %	27 %	0,001
<b>Diversification between asset classes</b>	56 %	20 %	24 %	0,000
<b>Geographical diversification</b>	20 %	24 %	56 %	0,000
<b>Sector/industry diversification</b>	46 %	23 %	31 %	0,026
<b>Restricting the weight of one asset</b>	49 %	22 %	29 %	0,003
<b>Investing in a large well known company</b>	40 %	10 %	50 %	0,152

The table shows clearly that low risk investments, securing the value of investments and long-term investments are statistically seen important for the majority of Finnish foundations. Derivatives are, on the other hand, unimportant for most of the foundations, but in the use of insurance the foundations are on average statistically undecided. Diversification within and between asset classes is clearly important for most of the foundations, whereas geographical diversification is evidently unimportant just as the geographical asset allocations earlier showed. Sector/industry diversification seems to be important although not as clearly as it was for the earlier cases. Restricting the weight of one asset is statistically seen important for the majority of foundations. In the case of investing in a large and well-known company there is no significant evidence that the foundations would on average view it either clearly important or unimportant.

The results shown above indicate that foundations have conservative or careful investment policies. The vast majority feels that low risk investments are important, in fact 44 % think they are very important. The results are very similar in the case of securing the value of investments. The only difference seems to be that as much as 60 % think that it is very important. The results



are not surprising, since the Foundations act requires the foundations to invest in a secure way. However, the act does not define what is a secure way of investing and therefore it leaves room to interpretation on how much risk is appropriate for foundations in Finland.

According to the answers the foundations gave, foundations think long-term investments, diversification within and between asset classes and also sector diversification to some extent are important factors in controlling risk. However, geographical diversification and derivatives seem to be unimportant for the majority of foundations. The question is whether Finnish foundations are also in reality cautious and careful investors or is the conservatism seen in the answers only trivial. From the asset allocation figures in section 5.2 it is possible to see as mentioned before that also in reality geographical diversification is not important for the foundations. However, if diversification between asset classes is important and low risk of investment even more important, it could be assumed that the foundations would invest less in equity and more in the other asset classes. In fact, the proportion of equity has probably even been higher during the stock market bubble in the late 1990's before the stock values fell to current levels.

To summarize, there is evidence that Finnish foundations have conservative investment policies according to their own answers. The question is whether this is the case also in reality or only in theory. It is not possible to give a clear answer using the data collected in this study and therefore further research is required to determine the true nature of the investment policies of foundations.

### **5.5. Foundations favor investments with steady cash flows in their investment policies**

The second hypothesis in this study argues that foundations favor investments that generate steady cash flows. Figure 3 above showed that the majority of the foundations in this study pay grants and figure 2 above illustrated that the foundations rely largely on income generated from their investments. In addition some foundations have restrictions on their investments that prohibit them from selling their assets and hence limit their possibility to use proceeds from other sources than for example dividends. Therefore it can be assumed that Finnish foundations require steady annual cash flows from their investments. Their stock investments should be emphasized on dividend paying stocks and mutual fund investments on distribution funds.

Table 8 illustrates what on average the foundations think about four cash flow related statements. As expected the majority of Finnish foundations consider steady cash flows from investments important. In fact 83 % think that steady cash flows are important or very important. The foundations that consider steady cash flow less important are probably foundations, which do not pay grants or foundations that get their income largely from other sources than investments.

Table 8: the average distribution of opinions regarding cash flow statements. The can't say column includes also answers that have been left empty.

	<b>Very important</b>	<b>Important</b>	<b>Less important</b>	<b>Not important</b>	<b>Cannot say</b>
<b>Steady cash flow</b>	47 %	36 %	8 %	5 %	5 %
<b>Dividend income</b>	24 %	41 %	14 %	10 %	11 %
<b>Interest income</b>	27 %	39 %	15 %	7 %	12 %
<b>Rental income</b>	25 %	13 %	9 %	27 %	27 %

Finnish foundations seem to consider also dividends and interest payments important in their investments decisions, in fact about 65 % considered both these statements either important or very important. The strength of the importance is, however, smaller than for the first statement. Only the opinions on rental income divide the foundations into two rather equal sized groups. There are also clearly more cannot say answers for the rental income statement than for the others. The fact that the three last statements are not considered as strongly important than the steady cash flow statement is partly due to the reason that many foundations considered in their answers cash flows from assets that they do not have less important than cash flows from assets they do have.

Table 9 below shows how significant the differences are between the opinions. Steady cash flows from investments seem to be statistically seen very significant for the Finnish foundations. This result clearly supports the second hypothesis. Also dividend income and interest income are statistically very significant for the foundations, which also supports the second hypothesis. Rental income, however, is not neither important nor unimportant for the majority of foundations. This result differs from the other results. As mentioned above one reason for this might be that foundations that do not consider rental income important have not invested in real estate. Further research is needed to determine whether this is the case also for foundations with real estate investments or does the result only comply on foundations in general.

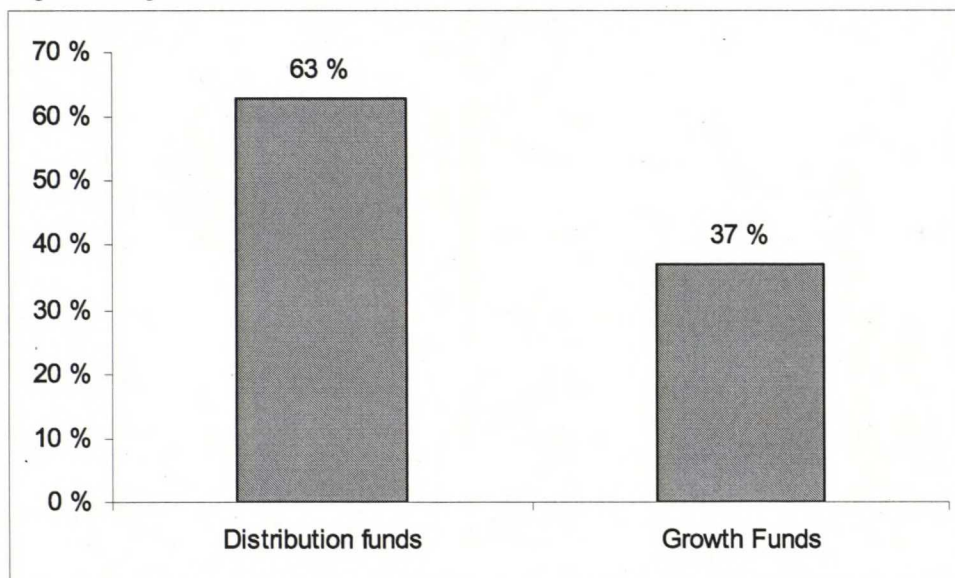


Table 9: In this table the “very important” and “important” columns from table 8 are combined into one column called “important” and the “less important” and “not important” columns are combined into one column called “unimportant”. The p-value column shows the significance of the difference between these two opinions for each of the 4 statements.

	Important	Cannot	Unimportant	Z	p-value
<b>Steady cash flow</b>	83 %	5 %	13 %	9,57	0,000
<b>Dividend income</b>	65 %	11 %	23 %	5,92	0,000
<b>Interest income</b>	66 %	12 %	22 %	6,18	0,000
<b>Rental income</b>	38 %	27 %	35 %	0,35	0,724

Figure 27 below shows how foundations’ investments in mutual funds are allocated between distribution funds and growth funds. Distribution funds are funds that annually distribute a share of their income to the unitholders and growth funds, on the other hand, are funds that reinvest all income they have generated. If the second hypothesis is true then it could be assumed that the majority of investments in mutual funds, made by the Finnish foundations, should be in distribution funds. This is also the case when looking at the results in figure 27, because on average 63 % of the investments in mutual funds are allocated into distribution funds and 37 % are allocated into growth funds. This indicates that foundations favor also in reality investments generating steady annual cash flows. Of course, the large foundations, whose investments as demonstrated earlier in table 5 comprise the majority of the foundation investment in Finland, have a substantial weight in the calculations and therefore a large influence on the results.

Figure 27: Foundations’ average investment in distribution and growth funds calculated as a weighted average





To summarize, Finnish foundations clearly consider steady cash flow from investments important. Dividends and interest income are as well important for foundations, but there is no evidence that foundations in Finland would regard rental income either important or unimportant. The result, however, might be different if looking only at answers from foundations with real estate investments. Foundations seem to be favoring also in reality, at least in mutual funds, investments paying annual dividends. Therefore the hypothesis that foundations favor steady cash flow in their investment policies should be accepted

### **5.6. Foundations paying grants consider investments yielding steady cash flows more important than foundations that do not pay grants at all.**

According to the third hypothesis, Finnish foundations paying grants need steady annual cash flows from their investments more than foundations that do not pay any grants. Other than grant paying foundations might generate enough revenue from their operations so that they have no need for steady annual cash flow from their investments. If the hypothesis should be true, the foundations that do not pay any grants should consider the statements mentioned in the former hypothesis less important than foundations paying grants. Their holdings in mutual funds should also be concentrated more in growth funds than distribution funds.

Table 10 below shows how important foundations paying and foundations not paying grants consider steady cash flow from their investments. According to the table the foundations paying grants seem to consider steady cash flow more important than foundations not paying at all grants. However, as the table shows the result is not statistically significant. The sample size and the differences between the opinions are too small to come to any solid conclusions.

Table 10: The difference in opinions between foundations paying and foundations not paying grants on whether steady cash flow from investments is important or not.

Steady cash flow	Important	Cannot say	Unimportant	N
Foundation pays grants	125 (86 %)	6 (4 %)	15 (10 %)	146
Foundations does not pay grants	22 (71 %)	2 (6 %)	7 (23 %)	31

$$\chi^2(2) = 4,1 \quad p = 0,1296$$

Table 11 below illustrates whether foundations paying and foundations not paying grants consider dividend income important or not. The table shows that foundations paying grants seem to consider dividend income more important than foundation that do not. The difference is large enough to be statistically significant despite the fact that the sample size is rather small for the foundations not paying grants.

Table 11: The difference in opinions between foundations paying and foundations not paying grants on whether dividend income from investments is important or not.

Dividend income	Important	Cannot say	Unimportant	N
Foundation pays grants	103 (71 %)	14 (10 %)	29 (20 %)	146
Foundations does not pay grants	13 (42 %)	6 (19 %)	12 (39 %)	31

$$\chi^2(2) = 9,3 \quad p = 0,0097$$

Table 12 below shows how foundations paying and foundations not paying grants differ when it comes to opinions on interest income. There seems to be difference according to the numbers in table 12 that foundations paying grants regard interest income more important than foundations not paying grants, however the difference is not statistically significant.

Table 12: The difference in opinions between foundations paying and foundations not paying grants on whether interest income from investments is important or not.

Interest income	Important	Cannot say	Unimportant	N
Foundation pays grants	101 (69 %)	15 (10 %)	30 (21 %)	146
Foundations does not pay grants	16 (52 %)	6 (19 %)	9 (29 %)	31

$$\chi^2(2) = 3,8 \quad p = 0,1491$$

Table 13 below demonstrates the difference in how foundations paying and foundations not paying grants consider rental income. It can be clearly seen that there is not any substantial difference between these two types of foundations. The small difference is clearly not statistically significant, but once again this is partly due to the rather small sample size.

Table 13: The difference in opinions between foundations paying and foundations not paying grants on whether rental income from investments is important or not.

Rental income	Important	Cannot say	Unimportant	N
Foundation pays grants	54 (37 %)	40 (27 %)	52 (36 %)	146
Foundations does not pay grants	13 (42 %)	8 (26 %)	10 (32 %)	31

$$\chi^2(2) = 0,3 \quad p = 0,8730$$

To summarize, there is no clear evidence indicating any difference between foundations paying and foundations not paying grants on how they consider steady cash flows. Statistically seen



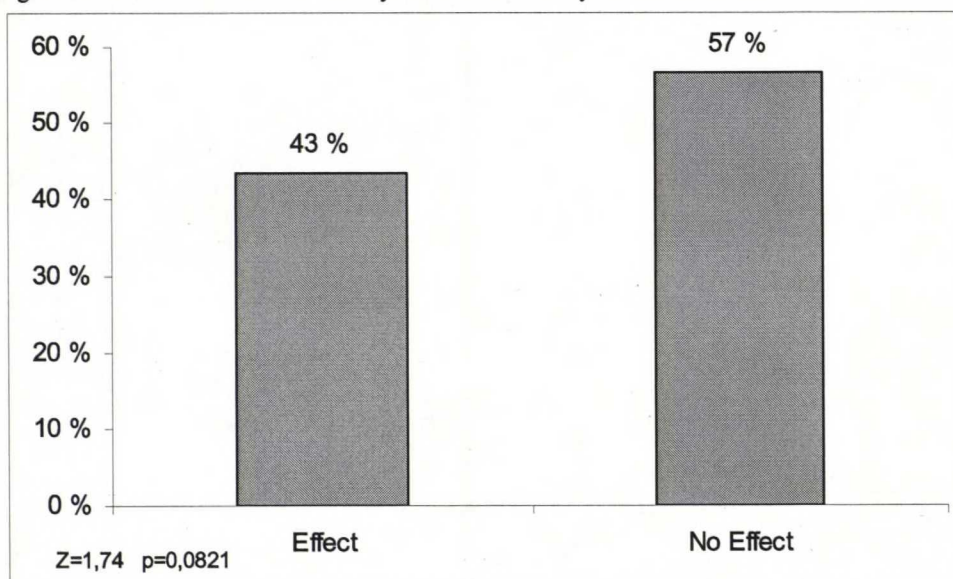
foundations paying grants seem to only consider dividend income more important than foundations not paying. In the case of steady cash flow in general, interest income and rental income there is no statistical evidence indicating differences in opinions. The conclusion is that foundations paying grants consider dividends more important than foundations not paying, however, the hypothesis has to be rejected because there is statistically seen no difference in the other statements.

### 5.7. Foundations' own by-laws and the terms set by their donors affect the investments of the majority of foundations

According to the fourth hypothesis, in this study, foundations' own by-laws and the terms set by donors affect the investments foundations make. There might be restrictions to selling assets donated to foundations when they were established or restrictions where the foundation can invest in altogether. Other restrictions might include the usage of the income generated from the investments or how active the foundation is allowed to be in its investments.

Figure 28 below shows the foundations' answers to the question whether the foundations' by-laws or terms set by donors affect their investments. It seems that the by-laws or terms set by donors do not affect the majority of foundations as only 43 % answered yes and 57 % answered no. The results are, however, not statistically significant.

Figure 28: Does the foundations' own by-laws or terms set by donors affect investments?





When asked how the by-laws or terms set by donors affects the foundations investment decisions the answers were quite homogeneous. Most often the terms rule that the foundation must invest in a secure and profitable way. Other restrictions include how the proceeds from the investments can be used or what assets can be sold or bought and where geographically it is possible to invest. To summarize, there is no proof that the foundations' by-laws or terms set by donors affect the majority of foundations. These restrictions and rules still affect many foundations, although they are not in many cases very strict or specific on what is and what is not allowed. In fact, as mentioned earlier above often these terms simply tell the foundations to invest in a secure and profitable way, which is in fact already required by the Foundations act. Therefore the third hypothesis can be rejected with quite good certainty. There is no clear evidence that the majority of foundations would be affected by restrictions and rules and many that are affected are in fact affected only by very vague restrictions. The results might be, however different if the foundations would be divided to foundations established by a will and foundations established in another way. The idea behind this is that foundations established by a will might be more controlled by the will so that the fortune donated cannot be for example sold than foundations that are established in another way.

### **5.8. Foundations are passive as investors**

The fifth and last hypothesis in this study argues that Finnish foundations are passive investors. Most foundations in Finland are tax-exempt organizations, which are monitored by the tax authorities to determine whether they satisfy the demands for being tax-exempt. One requirement is that tax-exempt organizations cannot be too active in their investments or they will loose their tax status. This should slow down the turnover of the foundations' investment portfolios. Because most of the foundations last in perpetuity, they can invest their money long-term and this will probably also slow down the investment portfolio turnover. In addition, foundations favor very much steady cash flow such as dividend, interest payment and rent payment and therefore do not need to generate income from active portfolio trading.

Table 14 below shows the turnover for the whole investment portfolio, the stock portfolio and the number of trades made in the whole portfolio in year 2004. The arithmetic average of turnover

for the whole portfolio is 0,13 or 13 % and for the stock portfolio 0,15 or 15 %. This means that the portfolios should be entirely turned over on average in about 7 years if the turnover stays at these levels. However, as the table shows the average is increased by a few high numbers. The median and mode are zero, which means that the foundations on average are very passive. This is confirmed when we examine the number of trades, which is on average less than nine for year 2004. The median and mode are once again much lower than the arithmetic average, two and zero respectively. These numbers are of course only a snap shot of one year and further study is needed to determine whether the results are the same in a longer time period.

Table 14: Descriptive statistics of portfolio turnover and number of trades made in 2004

	Whole portfolio	Stock portfolio	Number of trades
<b>Average</b>	0,13	0,15	8,96
<b>P-value</b>	0,000	0,000	0,000
<b>Median</b>	0	0	2
<b>Mode</b>	0	0	0
<b>Minimum</b>	0	0	0
<b>Maximum</b>	2	3	231
<b>Standard deviation</b>	0,29	0,37	23,19
<b>N</b>	119	103	143

There is some evidence as shown in table 4 that Finnish foundations are passive investors. The foundations need clearly to be careful in their investments so that they do not lose their tax status. However, the turnover of the investment portfolios of Finnish foundations differs statistically seen very significantly from zero. This is logical for many reasons. For example many foundations use partly or completely outside asset managers to take care of their investments. These managers usually trade more as they are professionals. In addition some foundations actively seek investment opportunities by buying and selling stocks.

According to the answers the foundations gave there are a few common denominators to what increases or decreases portfolio turnover. Risk management is perhaps the most common factor increasing portfolio turnover, as foundations need to make changes in their portfolios to manage and diversify risk. Other factors increasing turnover include need for cash or reinvestment of investment returns. There are also a few common factors decreasing portfolio turnover. As expected, tax reasons decrease portfolio turnover for many foundations, since the foundations do



not want to lose their tax-exempt status. Other reasons decreasing portfolio turnover include the foundations own by-laws and expenses rising from trading.

To summarize, Finnish foundations are not active traders when it comes to their investments. Their investment portfolio turnover is on average 13 % and their stock portfolio turnover is on average nearly the same, which is 15 %. This means that on average the investment portfolios turn completely around in about 7 years. One interesting point to note is that both the median and mode are zero, meaning that many foundations are in fact very passive indeed, as they do not trade at all. Further study is needed to compare other investor groups with foundations to determine how passive foundations are in relation to other investors.

### **5.9. Differences between Finnish foundations and pension funds in asset allocation**

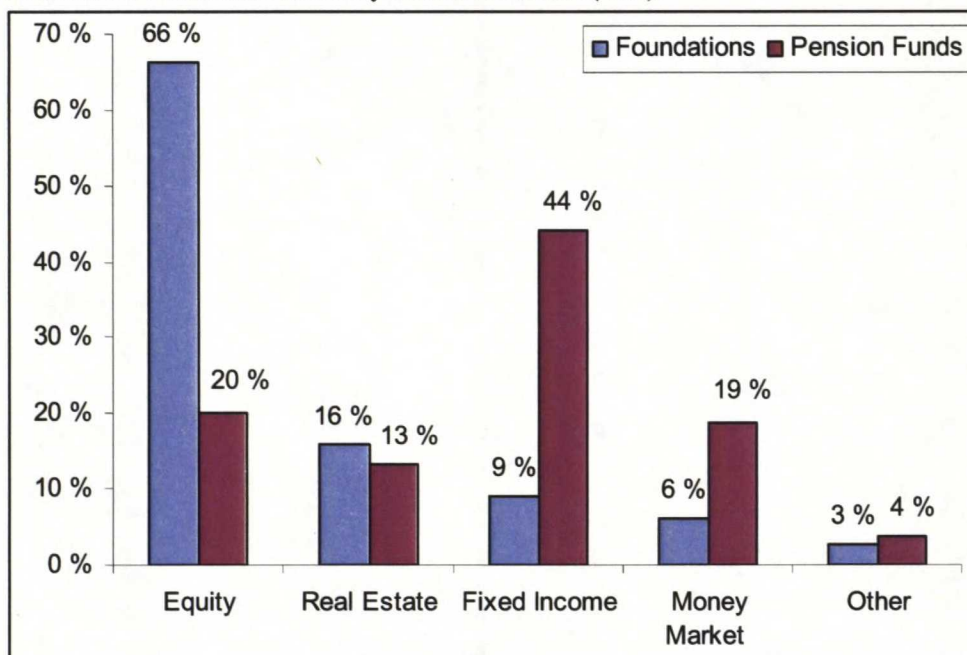
There are two major differences that affect investments in pension funds compared to foundations. First of all, pension funds have a shorter investment horizon, which depends on the age structure of their policyholders than foundations that have virtually an unlimited investment horizon unless the foundation is established only for a shorter time period. This would suggest, as discussed earlier in section 3.2, that foundations would allocate more of their investments in equity and less in money market instruments and even bonds than pension funds as equity becomes less risky and short-term money market investments and non inflation linked bonds more risky in the long run. Secondly, pension solvency margin rules and coverage rules limit the investment options of pension funds.

The two major points mentioned above should cause differences between foundations and pension funds in asset allocation. Figure 29 below shows how investments have been allocated between different asset classes in Finnish foundations and pension funds. The data for the pension funds is from Alestalo & Puttonen (2005) and is from year 2002. The data used in this study is from year 2004. The different time periods affect somewhat the results, especially the proportion of equity investments. Although, the results are affected to some extent, it should not be too significant to prevent us from getting an understanding of the differences between these two investor groups.



The figure below shows three major differences in asset allocation between foundations and pension funds. Firstly, the share of equity seem to be three times as large for foundations than pension funds. Secondly, the proportion of fixed income investment seem to be four times as large for pension funds than foundations and thirdly money market investments seem to be three times as large, relatively speaking, for pension funds than foundations. Allocation in other investment classes seems to be very similar between the two groups and it is not possible to say whether there are any significant differences.

Figure 29: Asset allocation in Finnish foundations and Finnish pension funds. The asset classes include also mutual funds. The data for foundations is from 2004 and for the pension funds from 2002 and is based on the information collected by Alestalo & Puttonen (2005).



The results are very much inline with what was predicted earlier. Foundations have a longer investment horizon than pension funds and therefore equity investment is much safer for foundations than pension funds. Pension funds have also pension solvency margin rules and coverage rules that they have to take into consideration when making strategic investment allocation decisions. Foundations, on the other hand, have allocated much smaller proportion of their investments in fixed income and money market investments than pension funds as these investments are not as safe in the long run as in the short run.

The results shown above are of course only a snap shot over time and can vary as time progresses, however the strategic asset allocation of foundations and pension funds should not change substantially at least over a shorter period of time so that the results would change significantly. Surely there might be also many other reason affecting asset allocation in these two investor groups than those mentioned earlier above and further research is therefore needed to find how significant the affects of the reasons mentioned above are and whether there is evidence of other factors affecting the differences in asset allocation between foundations and pension funds.

## 6. SUMMARY AND CONCLUSIONS

Finnish foundations are major investors in Finland. Some of the largest foundations are in fact among the biggest shareholders of many publicly traded Finnish companies. A large proportion of the proceeds from these investments are used to pay out grants for wide range of purposes. In fact, around 100 million euros were paid in 2004 alone by these foundations. The foundations in Finland differ from other investors as they are required by law to invest in safe and profitable and as many of them are tax exempt.

The total investments of the sample of around 200 foundations in this study were about 2.4 billion euros. The foundations in Finland, according to the results, invest heavily in equity, since as much as 66 % percent of the investments are allocated in this investment class. The proportion of other investment classes is significantly smaller as only 16 % is invested in real estate, 6 % in government bonds and money market instruments, 2 % in corporate bonds and the rest in other investments. However, there seems to be a difference in asset allocation when foundations are divided into three groups according to the size of their investment portfolio. Large foundations with investments over 5 million euros seem to invest more in equity and less in fixed income than small and medium size foundations. Small foundations (investments under 1 million) and medium size foundation (investments between 1 and 5 million) do not have substantial differences in their investments, although, real estate seem to be somewhat more used in medium size foundations.

The Finnish foundations allocate a major proportion of their investments in Finnish securities. According to the results from this study as much as 84 % of foundation investment is located in Finland. The rest of the European countries receive only 11 % of the money, while North America is has to settle for 3 % and Asia and the rest of the world are left with 1 % each. In the case of geographical asset allocation foundations of different size are very coherent as there are no major differences between the small, medium size, and large foundations. This is to some extend surprising, as it could have been assumed that large foundation would invest a larger proportion abroad than the smaller foundations.



Finnish foundations are clearly conservative when it comes to their investment policies. This study shows vividly that the vast majority of foundations consider low risk investments and securing the value of their investments either important or very important. The fact that the majority of foundations consider also long term investments either important or very important supports further the hypothesis that the foundations are careful or conservative in their investments. Diversification between and within asset classes is also clearly considered either important or very important by the majority of foundations. However, the majority does not find geographical asset allocation important. This result is inline with reality also, since as shown above foundations invest the vast majority of their wealth into Finland. This proves that Finnish foundations are obviously not interested in investing abroad.

The results in this study show clearly that foundations in Finland consider steady cash flows from their investments important in the their investment policies. The wide majority regards steady cash flow, dividend income and interest income either important or very important. However, rental income is viewed neither important nor unimportant. This is somewhat in conflict with the other results. However, this can probably be explained by the fact that foundations that do not own real estate might have considered in their answers rental income unimportant. The fact that the majority of foundations' mutual fund investments are made in funds that pay annual dividends supports the results that foundations favor steady cash flows.

There is no clear evidence that foundations paying grants favor steady cash in their investments flow more than foundations that do not pay grants. According to the results dividend income seems to be the only source of income that is favored more by grant paying foundations. On steady cash flow in general, interest income and rental income there seems to be no difference between these two groups. However, the sample of non-grant paying foundations was rather small and therefore the results might be different with a larger sample.

According to the results shown in this study, the foundations' own by-laws or the terms set by donors do not affect the investments of the majority of these foundations. There are still, however, many foundations that are affected by these rules, but in many cases these rules are rather vague by requiring the foundations just to invest in a safe and profitable way, which is of

course also required by the foundations act. Other restrictions include rules on how the proceeds from the investments can be used, which assets can be used and where geographically it is possible to invest.

Foundations in Finland are rather passive in their investments. It takes on average about 7 years for the foundations to completely turnover their investment portfolio. One major reason why foundations have to be quite passive in their investments is because they might lose their tax-exempt status if they trade their assets too actively. To clearly determine whether Finnish foundations are passive or not, the results should be compared to results from other investment groups.

This study shows that investment portfolios of Finnish foundations differ quite a lot from investment portfolios of Finnish pension funds. For foundations equity is clearly the single most important asset class whereas for pension funds fixed income investments are vividly the largest asset class. One reason might be that foundations have longer investment horizons than pension funds and therefore large equity investments are in the long run not as risky for them as they are for pension funds with shorter investment horizons. Investments of pension funds are also restricted by pension solvency margin rules and coverage rules.

Further research is needed to determine why Finnish foundations do not diversify more their investments abroad. Further study is also needed to determine whether foundations paying grants favor more steady cash flow than foundations not paying. In addition research is also needed to compare portfolio turnover to other investor groups to find out how passive foundations are compared with others. Finally, a topic for further study could also be the differences in investments between pension funds and foundations and whether these are due to different investment horizons.

## REFERENCES

- Ahdeoja, J. 2003. Säätiöt tukevat suomalaisen yhteiskunnan toimintaa. *PRH tieto* 2, 10-12
- Alesto, N. & Puttonen, V. 2005. Asset Allocation in Finnish Pension Funds. *Journal of Pension Economics and Finance* (forthcoming)
- Campbell, J. Y. & Viceira, L. M. 2002. Strategic Asset Allocation Portfolio Choice for Long-Term Investors. *Oxford University Press*.
- Clark, F. & Wootton, C. 1995. College Endowment Funds: An Examination of Portfolio Performance. *American Business Review* 13, 26-32
- Davidson, H. 1971. Investing College Endowment Funds: A Comparison of Internal and External Management. *Financial Analysts Journal* 27, 69-74
- Elton, E. & Gruber, M. 1997. Modern portfolio theory, 1950 to date. *Journal of Banking and Finance* 21 1743-1759
- Fama, E.F. 1970. Multiperiod consumption-investment decisions. *American Economics Review* 60, 163-174
- Fama, E.F. 1972. Components of Investment Performance. *Journal of Finance* 27, 551-567
- Ferri, M., Oberhelman, D., Roenfeldt, R. 1984. Market Timing and Mutual Fund Portfolio Composition. *Journal of Financial Research* 7, 143-150
- Fisher, L. & Lorie, J. 1968. Rates of return on Investments in Common Stock: The Year-by Year Record 1926-1965. *Journal of Business* 41, 291-316



- Glassman, J. K. & Hasset, K. A. 1999. Dow 36,000: The New Strategy for Profiting from the Coming Rise in the Stock Market. *Times Books*, New York
- Hakansson, N. 1970. Optimal Investment and Consumption Strategies Under Risk for a Class of Utility Functions. *Econometrica* 38, 587-607
- Hakansson, N. 1974. Convergence in Multiperiod Choice. *Journal of Financial Economics* 1, 201-224
- Helenius, R. & Laaksonen, L. 1983. Yritystoimintaa rahoittavat säätiöt ja rahastot. T2586 *Helsinki School of Economics*, Helsinki.
- Jensen, M. 1968. The Performance of Mutual Funds in the Period 1945-1964. *Journal of Finance* 23, 389-416
- Kim, T. 1971. Investment Performance of Collage Endowment Funds. *Quarterly Review of Economics and Business* 16, 73-83
- Kurkinen, 1988. Säätiön perustaminen. In the book Säätiöt ja niiden verotus. Lakimiesliiton Kustannus, Helsinki. 7-19
- Manninen, M. 2005. Säätiöt Suomessa. *Yliopistopaino*, Helsinki.
- Markowitz, H. 1952. Portfolio Selection. *Journal of Finance* 7. 77-91
- Markowitz, H. 1959. Portfolio Selection: Efficient Diversification of Investments. Wiley, New York
- Merton, R. 1990. *Continuous Time Finance*. Basil Blackwell, Oxford
- Mossin, J. 1969. Optimal Multiperiod Portfolio Policies. *Journal Business* 41, 215-229

Palmu, J. 1994. The Real Estate Portfolio Strategies and Management of Finnish Foundation. *Kiinteistöopin ja talousoikeuden julkaisuja A 11*, Espoo

PRH, 2004. Register of Foundations. <http://www.prh.fi/en/saatiorekisteri.html>

Sharpe, W. 1966. Mutual Fund Performance. *Journal of Business* 39, 119-138

Siegel, J. 1994. Stocks for the Long Run. *McGraw-Hill*, New York

Tobin, J. 1958. Liquidity Preference as Behavior towards Risk. *Review of Economic Studies* 25, 68-85

Ylikortes, S. 1991. Yleishyödyllisen yhteisön verotus ja verosuunnittelu. *T5016 Helsinki School of Economics*, Helsinki.